JAN 26 1948

MOTOR AGE

JANUARY 1948

A CHILTON PUBLICATION

MOTOR AGE

Brings You

The ASI SHOW

A COMPLETE REVIEW IN THIS ISSUE

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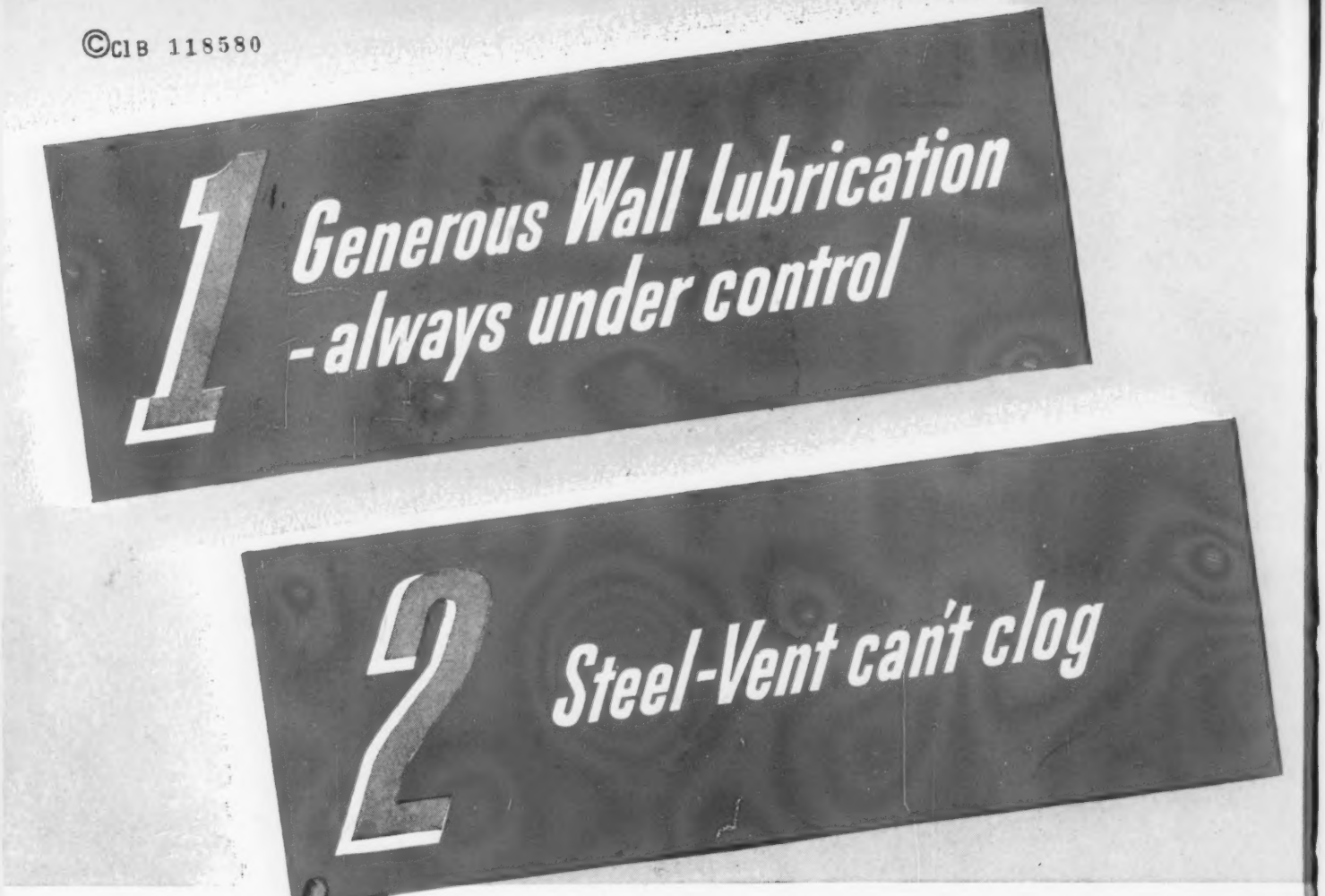


2 BASIC REASONS FOR STEEL-VENT'S LONGER LIFE

Obviously a ring job will last longer if cylinder wall lubrication is generous, and the oil ring does not clog.

Steel-Vent gives *generous wall lubrication* right from the start because it has far greater oil-carrying capacity. And Steel-Vent *continues* to function efficiently because the side-opening spacer operates against a moving segment with a "breathing" action that breaks up and flushes away clogging formations. It just can't clog.

This is why you can depend on Steel-Vent for longer life—in any rebore, or rering job.

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN

HASTINGS LTD., TORONTO

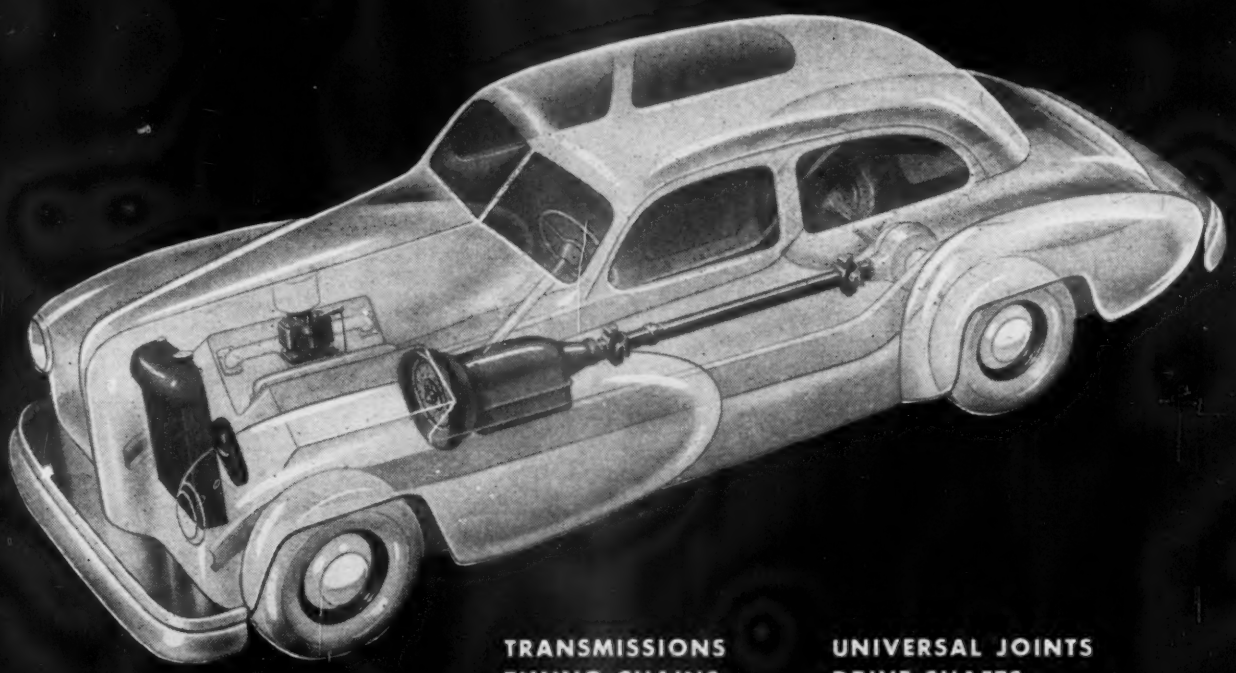
HASTINGS

STEEL-VENT PISTON RINGS

***TOUGH** on oil pumping • **GENTLE** on cylinder walls*

ENGINEERING
B-W
PRODUCTION

19 of the 20 makes of motor cars embody essential parts made by BORG-WARNER!



TRANSMISSIONS
TIMING CHAINS
OVERDRIVES
SYNCHRONIZERS
CLUTCHES

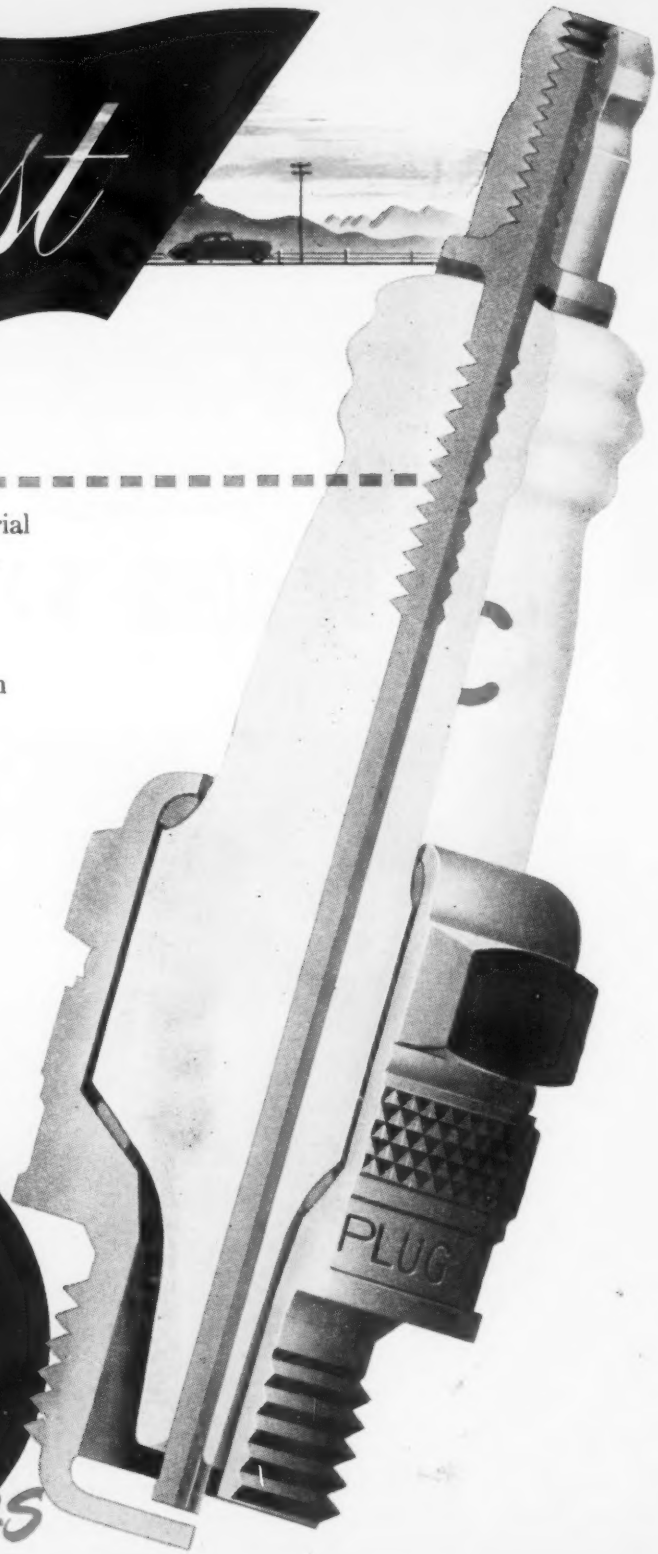
UNIVERSAL JOINTS
DRIVE SHAFTS
CARBURETORS
RADIATORS
TAPERED WHEEL DISCS

Executive Offices, 310 S. Michigan Ave., Chicago. These units form Borg-Warner: BORG & BECK • BORG-WARNER INTERNATIONAL • BORG WARNER SERVICE PARTS • CALUMET STEEL • DETROIT GEAR • DETROIT VAPOR STOVE FRANKLIN STEEL • INGERSOLL STEEL • LONG MANUFACTURING • LONG MANUFACTURING CO., LTD. • MARBON • MARVEL-SCHEBLER CARBURETER • MECHANICS UNIVERSAL JOINT • MORSE CHAIN • MORSE CHAIN CO., LTD. • NORGE • NORGE-HEAT NORGE MACHINE PRODUCTS • PESCO PRODUCTS • ROCKFORD CLUTCH • SPRING DIVISION • SUPERIOR SHEET STEEL DIVISION • WARNER AUTOMOTIVE PARTS • WARNER GEAR • WARNER GEAR CO., LTD.

in ceramics

AC's new patented aluminum oxide insulator material is another "first" in the manufacture of spark plug ceramic insulators. As early as World War I, AC developed the *first practical ceramic aircraft spark plug,* for Liberty engines. It was perfected and ready for World War II—and its ceramic aluminum oxide insulator material was used in spark plugs exclusively by American war planes.

Now you can supply your customers with that same patented aluminum oxide insulator material in AC Spark Plugs especially designed for their car, truck or tractor engines—plugs that can take terrific punishment—plugs whose wider Heat Range adapts them to a wider range of engine temperatures. For easier starting—better idling—steadier firing under heavy load, sell AC's. They give *utmost reliability.*



AC

SPARK PLUGS

AC's new *patented* aluminum oxide insulator material has revolutionized spark plug performance to a degree that no car, truck or tractor owner can afford to overlook. That means profits for you. There will be a big demand for these new AC's. They're self-cleaning — resistant to oxide coating — and they save time, maintenance and plug cost. Get a supply from your AC wholesaler.

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION

In the Spotlight...
SINCE 1909
AVIATION FORM-A-GASKET
INDIAN HEAD
PERMATEX
BLUE-BLAZES
PERMA-LUSTRE
REFLECTOR-CHROMIUM POLISH
COOLING SYSTEM CLEANER
RADIATOR CEMENT
RUST PREVENTOR
LIQUID RADIATOR CEMENT
DOUBLE ACTION
INDIAN HEAD
RADIATOR CEMENT
RADIATOR CLEANER
FORM-A-WELD
KNEE ACTION OIL
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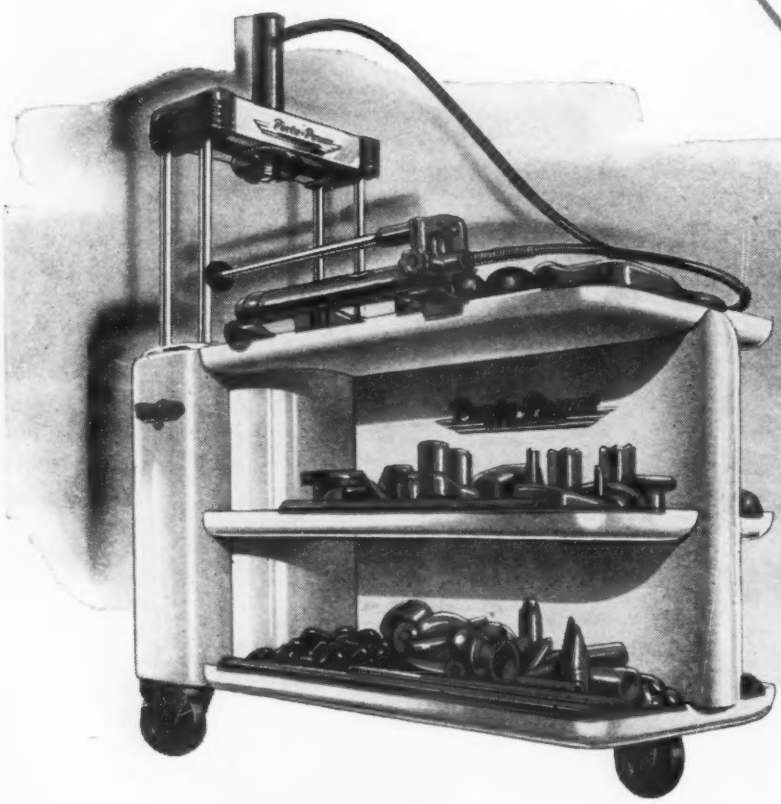
RUBBER SHACKLE
PENETRATING OIL
TOON-OYL
ANTI-STORM TOP DRESSING
GLASS SEALER
COMPLETE LINE OF CHEMICAL MAINTENANCE PRODUCTS
by
PERMATEX COMPANY, INC., BROOKLYN 29, N.Y., U.S.A.

Plan now to own this Universal Shop Tool

THE HEART OF THE SHOP

Porto-Power* is Profit Power!



New Postwar Deluxe Porto-Power* with the portable pylon stand combines extra utility and startling beauty. Enlarged assortment—convenient, easily accessible shelves—swivel front caster—non-metallic wheels—white, chromium-trimmed stand for greater appearance-merchandising and an endless list of other outstanding features, create many new advantages for this famous all-purpose hydraulic shop tool.

* Trademark Reg. U. S. Pat. Off.

Bantam is a Bonanza, Too!

Bantam is back! This 2-ton Porto-Power speeds up 90% of all sheet metal work in body rebuilding — and does scores of other jobs, too. Bantam is loaded with new fool-proof features —and now also works with the famous "Wedgie".

*Reg. U. S. Pat. Off.

Mister, you're right when you say Porto-Power handles body rebuilding with *unequalled* profits. But listen, that's only *the beginning* of a long list of uses no other shop equipment can even touch! This hydraulic workshop on wheels, with its exclusive completeness, serves 1001 jobs throughout REPAIR WORK as well as in REBUILDING and RECONDITIONING! It pulls, pushes, bends, presses, straightens and clamps with tons of power. And there is double-barreled economy in Porto-Power, too. It eliminates the need for many special, costly tools—and saves scarce manpower. For delivery of this "miracle" tool, see your Blackhawk Jobber today.

A Product of **BLACKHAWK MFG. CO.**, Dept. P 618 **MILWAUKEE 1, WISCONSIN**

There is only one Porto-Power. . . and it is made by*

BLACKHAWK

Why your PERMITE JOBBER can Serve You Better

YOUR local Permite Jobber is an active part of a nationwide system which maintains at all times a steady flow of Permite Replacement Parts to repair shops everywhere. You can count on him for quick service on the parts you need for ANY MAKE of car, truck or bus.

Even if your Jobber occasionally should be out of a valve, piston, or other Permite Part you need, he can quickly obtain it from his nearby Permite Warehouse Distributor. Complete warehouse stocks located at 60 strategic centers supply the coast-to-coast network of Permite Parts Jobbers.

Correct fitting, easily installed Permite Replacement Parts when you need them; helpful recommendations from the Jobber himself or from a Permite Field Engineer, if required, on any troublesome service problem; sales helps; business-building cooperation on all details — all are part of Permite service available to you through your Permite Jobber. He is glad to work closely with you. Call on him for the replacement parts you need.

ALUMINUM INDUSTRIES, Inc.
Cincinnati 25, Ohio

PERMITE

REPLACEMENT PARTS

PISTONS	VALVE GUIDES	WATER PUMPS	CYLINDER SLEEVES AND ASSEMBLIES	TIE-ROD ENDS	MUFFLERS AND CLAMPS
PISTON PINS	VALVE STEM KEYS	WATER PUMP REPAIR KITS		BOLT SETS	
VALVES	VALVE SPRINGS		SPRING SHACKLES	BUSHINGS	TAIL PIPES

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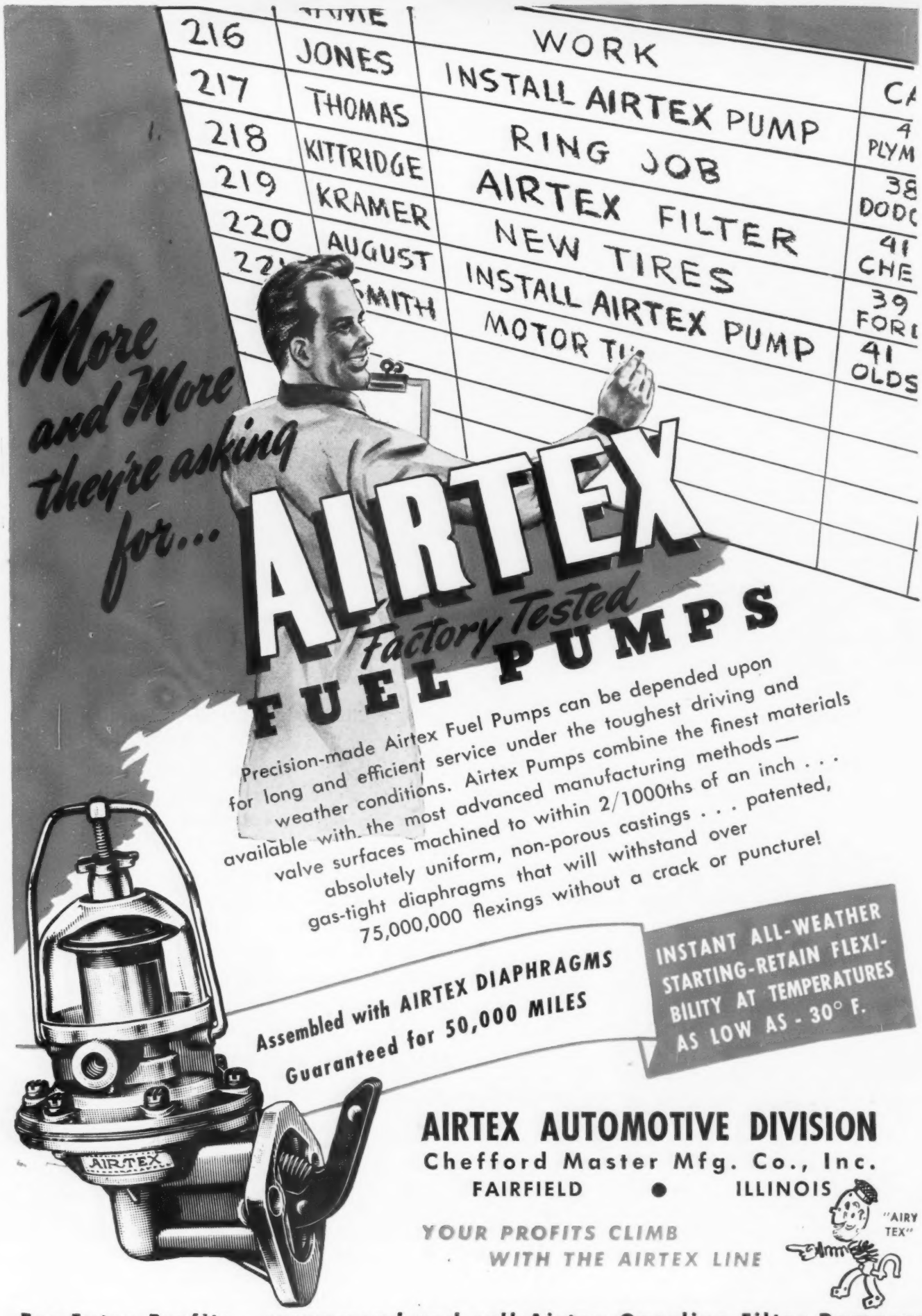
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Factory Tested
FUEL PUMPS
Precision-made Airtex Fuel Pumps can be depended upon for long and efficient service under the toughest driving and weather conditions. Airtex Pumps combine the finest materials available with the most advanced manufacturing methods — valve surfaces machined to within 2/1000ths of an inch . . . absolutely uniform, non-porous castings . . . patented, gas-tight diaphragms that will withstand over 75,000,000 flexings without a crack or puncture!
Assembled with AIRTEX DIAPHRAGMS
Guaranteed for 50,000 MILES
INSTANT ALL-WEATHER STARTING-RETAIN FLEXIBILITY AT TEMPERATURES AS LOW AS - 30° F.
AIRTEX AUTOMOTIVE DIVISION
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YOUR PROFITS CLIMB WITH THE AIRTEX LINE
"AIRY TEX"
For Extra Profits — recommend and sell Airtex Gasoline Filter-Dampers

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OIL-FILLED IGNITION COIL

For Improved Coil Performance

—Longer Coil Life

When you replace with a Delco-Remy Oil-Filled Coil, you give your customer an *extra* measure of protection and satisfaction. For this finer coil is housed in a one-piece, seamless, drawn-steel case, and *hermetically sealed in oil* against air and moisture.

High-dielectric porcelain insulators provide permanent protection against insulator breakdown. The heavily insulated, high-voltage windings deliver a hot, powerful spark under all conditions. Delco-Remy Oil-Filled Coils can be depended upon to perform efficiently in all weather and over a longer period of time.

The millions of Delco-Remy-equipped cars and trucks make up a tremendous market for Delco-Remy Oil-Filled Coils. Use them for replacement, and insure greater customer satisfaction and goodwill!

UNITED SERVICE MOTORS

DELCO-REMY—A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

Delco-Remy
DIVISION, GENERAL MOTORS CORPORATION
ANDERSON, INDIANA

WHEREVER WHEELS TURN OR PROPELLERS SPIN

YOU'RE IN A

GOOD BUSINESS!

Dollar volume in engine repair and maintenance expected to hit new high this year!

BUT...

YOU HAVE MORE

COMPETITORS

THAN EVER

There are 16,000 more repair shops out for business now than there were three years ago.

PROTECT *YOUR* PROFITS

WITH THE

Pedrick Franchise Dealer Program

Safeguard your share of profits . . . and build *new* volume . . . with the most effective selling program you ever saw!

With this Plan, you get everything you need to attract *more* of this business to *your* shop. You get the exclusive advantages of "Heat-Shaped" piston rings, backed by the most liberal guarantee in the industry. You get a shop identification sign that *really* stands out . . . plus the support of a colorful, national advertising campaign that makes this sign a symbol of confidence to car, truck and tractor owners in your neighborhood. You get effective local sales aids . . . your *own* merchandising helps . . . to bring in more engine repair work. *And* . . . you get something *extra* from your Pedrick jobber; something that guards against loss in "kick-back" situations.

To meet competition, to *beat* competition—see your Pedrick jobber today. WILKENING MANUFACTURING Co., Philadelphia 42, Pa. *In Canada:* Wilkening Manufacturing Co. (Canada) Ltd., Toronto. *For 28 years, supplier of piston rings to leading vehicle and engine manufacturers.*

Pedrick

"HEAT-SHAPED"

PISTON RINGS

ASK YOUR JOBBER ABOUT THESE

NEW GROTE SAFETY DEVICES

FEATURING

PLEXIGLAS LENSES

BOOTH C329 and 331

NEW-STYLE GROTE FOG LAMPS

With new powerful car-size Mazda Sealed Beam . . . permanent high lustre finish, chrome on brass . . . two types of bracket mounting. For all new cars.

NEW GROTE 203 MARKER LAMP

Flexible bracket with rubber fabric between lamp and mounting bracket. Long-lasting Plexiglas lens in choice of four colors.

NEW GROTE BACKUP LIGHTS

Modern styling . . . highly polished nickel chromium finish on brass — rust free for life. Plexiglas lens gives brilliant, widespread light. Equipped with non-tarnishing reflector.

NEW GROTE 201 SIDE MARKER OR CLEARANCE LIGHT

Strong steel angle bracket welded to shell. Special Grote Plexiglas beehive lens in red, amber, green or clear.

NEW GROTE TRACTOR LAMP

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Popular three-on-bar design. Fully enclosed wiring protects against weather. Plexiglas lenses end breakage. Lenses available in four colors.

PLUS these service-proved GROTE GUARDIANS

- Reflector Flares
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Sell Safety with

GROTE

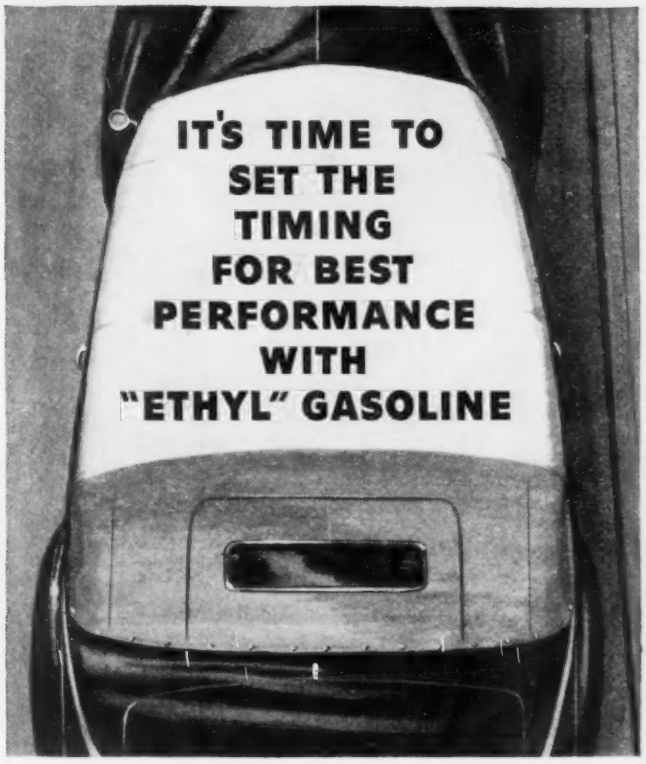
Reflectors • Lamps • Flares

Grote Manufacturing Company, Inc., Bellevue, Ky.

AUTOMOTIVE SALES OFFICE, MOORESTOWN, N. J.

De Soto lets owners drive without shifting!

"ADVENTURES OF CHRISTOPHER WELLS" — DE SOTO-PLYMOUTH DEALER PROGRAM — EVERY SUNDAY NIGHT OVER ALL COLUMBIA STATIONS



Right now the petroleum industry is working night and day to catch up with the record demand for gasoline. You can help conserve gasoline by assisting car owners in getting the most mileage from every gallon of fuel. As a part of your tune-up service, set the timing to take full advantage of high quality gasoline improved with "Ethyl" antiknock compound and give your customers all the mileage, power and performance their cars can deliver.

ETHYL CORPORATION, New York, N. Y.

"ETHYL" (TRADE-MARK) ANTIKNOCK COMPOUND — ETHYL CORPORATION

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Products sold under the "ETHYL" trade-mark—Antiknock Compound . . . Detergent Cleaner . . . Salt Cake . . . Ethylene Dichloride . . . Sodium Metallic . . . Chlorine (liquid) . . . Oil Soluble Dye.

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Your Best Electrical Connection

See these Catalogs!

Now the Andrews Line is more complete than ever. New, attractive, colorful 1948 catalogs available. Two full sections illustrating and listing all popular automotive cable and electrical products and including practical sales and service merchandisers.

SOME OF THE PRODUCTS FEATURED:

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AUTOMOTIVE CABLE PRODUCTS

BATTERY CABLES
HIGH TENSION CABLE
PRIMARY CABLE
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HARNESS FOR FORDS
HARNESS FOR CHEVROLETS
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IGNITION TERMINALS
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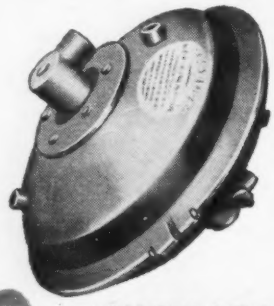
"VACDRAULIC" STOPS BUSES with *Feather touch* Control



"VACDRAULIC" SUPERIORITIES

Easier to Operate—smooth, fast, powerful—with perfect "brake-feel" and feather-touch pedal control.

Easier to Mount—connects only to hydraulic line and intake manifold.

Easier to Maintain—only unit with valves and all other moving parts sealed inside—no lubrication; no adjustments—unaffected by dirt, grease, temperature changes or rough use.

The Power Brake Unit that Stops Faster—Smoother for Greater Safety of America's 30 Million School Children

At dangerous railroad crossings . . . in countless driving emergencies in city, town, and country . . . in all kinds of weather . . . buses daily *MUST* stop *SAFELY* to protect the precious lives of America's 30 million school children. Kelsey-Hayes famous "Vacdraulic" power brake units provide that kind of protective braking for school buses, as well as for all other vehicles, from smallest passenger cars to the largest trucks and buses. "Vacdraulic," product of many years of Kelsey-Hayes engineering "Know-How," gives the driver a perfect "brake-feel," and requires only a "feather-touch" on the brake pedal for perfect control at all times. Phone or write for complete information on how "Vacdraulic" can do a better braking job for you.

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KELSEY-HAYES WHEEL COMPANY

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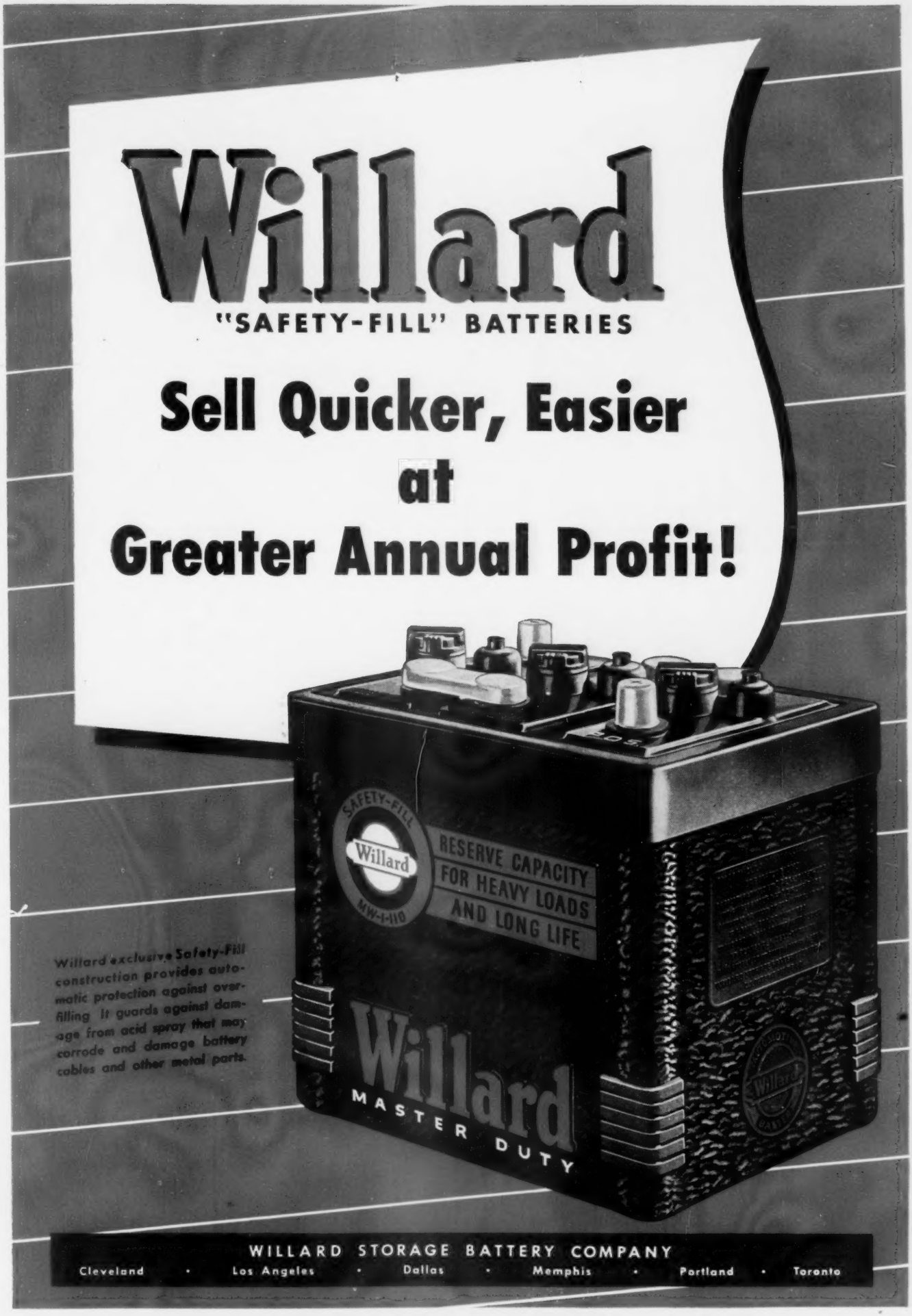
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Sell Quicker, Easier
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FOR HEAVY LOADS
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MASTER DUTY
Willard exclusive Safety-Fill construction provides automatic protection against overfilling. It guards against damage from acid spray that may corrode and damage battery cables and other metal parts.
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for Safety's Sake... REMEMBER YOUR 3 R's

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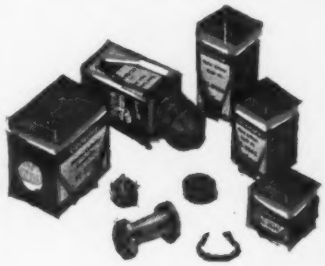
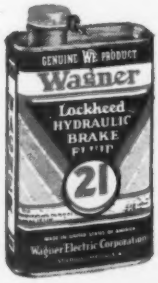
Perfect fit, dependable performance and known acceptance are available in Wagner parts, made by pioneer manufacturers of original Wagner Lockheed Hydraulic Brakes.



2 REFILL with Wagner LOCKHEED HYDRAULIC BRAKE FLUID

An all-season fluid that functions perfectly under all atmospheric temperatures. Used by car and truck manufacturers and recommended for all hydraulic brakes.



3 RELINE with Wagner CoMaX BRAKE LINING

Designed, manufactured and thoroughly tested to insure more quick, safe, smooth stops per lining. Complete coverage for *all* your needs... in sets, rolls, blocks, slabs or cut segments. Available everywhere through Wagner jobbers.

Wagner Electric Corporation

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EVERY REPAIRMAN NEEDS

Bulletins HU-17G and HU-197... Tips for better Brake Service—free on request.

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID · NoRol CoMaX BRAKE LINING · AIR BRAKES · TACHOGRAPHS ELECTRIC MOTORS · TRANSFORMERS · INDUSTRIAL BRAKES

A48-1

Whiz

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LEADER IN MAINTENANCE CHEMICALS

A BLINGER!.. A HOT NUMBER! A REAL PROFIT MAKER!

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A GREAT PRODUCT...

BIT

brings you quick profits now at the peak of the cold-weather demand!

ZORBIT opened a big, new winter-market to you, so be sure to get your share by talking Zorbit to every customer *now* when he needs it most!

ZORBIT is a winter must for every car, truck, tractor, bus, boat, oil burner!

ZORBIT prevents freezing, rusting, or gum deposits from clogging fuel line and carburetor . . . helps eliminate plug-fouling!

ZORBIT sells fast and often summer and winter *in any climate* because it licks the condensation problem in fuel systems!

ZORBIT is selling *fast!* Order your replacement stock from your Whiz jobber *today!*

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A REAL PROFIT MAKER!

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LEADER IN MAINTENANCE CHEMICALS

MOTOR RYTHM

For Sure Starts in Cold Weather !

A year-'round must for motors!

- Assures fast starts in cold weather!
- Keeps motors clean *inside*!
- Protects *new* motors during critical break-in period! Regular use maintains peak motor efficiency for years!
- The modern, chemical, *safe* tune-up!

A BIG SELLER!...A REPEAT SELLER! A REAL PROFIT MAKER!

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FLICK THE SWITCH . . . IT HOLDS THE BRAKES TOUCH THE ACCELERATOR . . . IT AUTOMATICALLY RELEASES

- **The *ONLY* semi-automatic brake holder on the market.**
- **Manually on! Releases automatically!**
- **You *CAN'T STALL* or *FORGET* to release THE PENROSE BRAKE HOLDER.**
- **Priced Right! Complete Package! Easy to Install! Ready Market!**
- **Inquiries are invited from Distributors, Car Dealers, Service Stations and Fleet Operators.**

..WRITE TODAY..

Now — an amazing advance in driving convenience, with that all important safety factor.

Imagine a Finger-Touch Brake Holder.

If you are a Truck, Bus or Passenger Car driver, once you have experienced Finger-Touch Brake Holding, you will no longer accept leg muscle holding or clutch riding.

A touch of the finger and the brakes hold on an up or down grade. A touch of the finger and there is no drift.

A touch of the finger and The Penrose Brake-Holder holds. It lets go the instant you start.

Universal models, easy to install on Passenger Cars or on any Truck or Bus equipped with hydraulic brakes.

Consider these features

1. **Eliminates excessive foot braking.**
2. **Saves clutch wear. No clutch riding in traffic.**
3. **Saves tiresome braking on hills.**
4. **No backward drift.**
5. **Faster getaway at traffic lights.**
6. **Saves gas at traffic stops.**

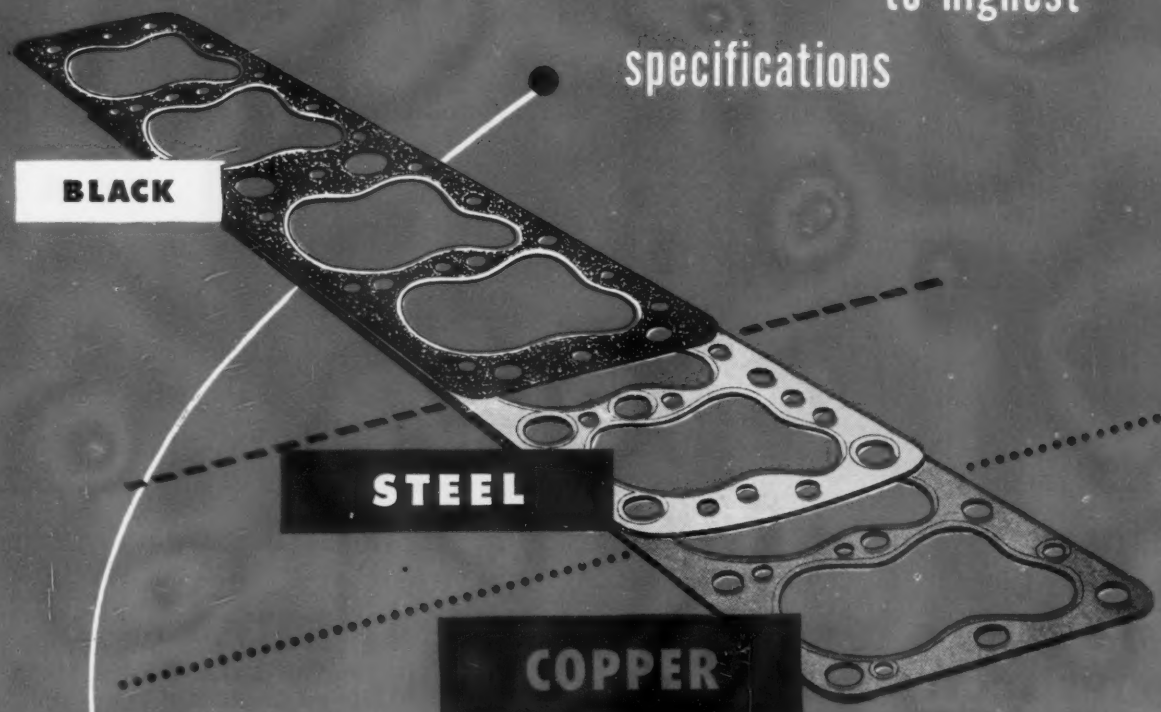
The Penrose BRAKE HOLDER

PENROSE PRODUCTS COMPANY 599 Broadway, Newark 4, N. J.

U. S. PATS. APPLIED FOR

HEAD GASKETS

precision made
to highest
specifications



by FEL-PRO

STOP every "DRIP" and keep him stopped use FEL-PRO!

INDIVIDUALLY OR IN FULL SETS

Whatever the job, when you ask for Fel-Pro Gaskets you can match original head gasket equipment or use your special favorite—be it black, steel or copper. You can get those Fel-Pro black, steel or copper head gaskets individually, in Valve Grinding Sets or in Full Gasket Sets. They're compression-tight, leak-proof, uniformly dependable, preferred by thousands of manufacturers and tens of thousands of repair shops all over the world. Just as Fel-Pro Gaskets satisfy the highest specifications of America's leading engine manufacturers, so will Fel-Pro meet your highest expectations of extra value in gaskets.

FULL GASKET SETS, PACKINGS, GREASE RETAINERS

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FELT PRODUCTS MFG. CO. 1521 CARROLL AVENUE • CHICAGO 7, ILLINOIS

MAKE LIFE LINES* A PROFIT LINE WITH IMPERIAL MERCHANDISERS

IMPERIAL FLEXIBLE LINES The BETTER gas and oil line.

IMPERIAL BRASS FITTINGS. Finer because they're FORGED

FLEXIBLE FUEL LINE STOCK. Imperial No. 161-FT.

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*Gas and Oil Lines are the Life Lines of Cars and Trucks

✓ CHECK THEM FREQUENTLY

. . . . Make Replacements with TIME-PROVEN IMPERIAL PARTS

AAA records show that gas line failures are one of the first ten causes of road breakdowns.

On every tune-up . . . on all fuel system jobs . . . on every seasonal check-up . . . it will pay you to take a few seconds to check gas and oil lines . . . and to make needed replacements with IMPERIAL PARTS . . . replacements that may prevent a road breakdown.

The sturdy Merchandisers illustrated are designed so that the right parts are instantly available and easy to select — a big step in handling gas and oil line work *faster* and more profitably. What's more, they call customers' attention to your service facilities.

Start now . . . make *Life Lines* a Profit Line with Imperial Gas and Oil Line Parts and Imperial Merchandisers. See your Imperial Jobber. Write for Bulletin 351.

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Brass Fittings • Flexible Fuel Lines • Tube Working Tools • Battery Hydrometers Barrel Faucets • Welding Equipment

Accurate to a

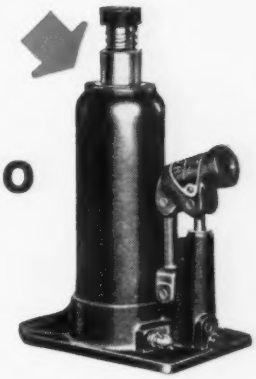
Walker **KNOW-HOW** — *a typical example*

The accuracy of the outside diameter of this TANK NUT is rigidly held to within 3 thousandths of an inch.* And the concentricity of the inside threads and the outside diameter to within 4 thousandths. This insures a perfect line-up of the parts which the Tank Nut "ties" together. Result: a leak-tight, "load-fast," dependable jack.

** To answer your question, a cat's whisker IS three thousandths of an inch.*

WALKER

cat's whisker



WALKER *KNOW-HOW* MAKES SERIES 900 LEAK-TIGHT AND "LOAD-FAST"

● To be any good to anyone, a jack must be more than a load *lifter*. It's got to be a load *holder*, too.

When the alignment of hydraulic jack parts is sloppy, the oil is bound to leak out under the terrifically high pressures needed for its operation. True, the jack may raise a load, but it can't hold it. Slowly, but surely, the ram goes down, load and all.

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Manufacturing to exacting standards . . . on a big-volume basis, day in and day out . . . is typical of the KNOW-HOW throughout the Walker organization—KNOW-HOW that makes Walker Series 900 portable hydraulics the leader in "tool-box" jacks.

WALKER MANUFACTURING COMPANY OF WISCONSIN • RACINE, WISCONSIN

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The Famous Walker Series 900 Portable Hydraulic Jacks from 1½ to 50 Tons Capacity

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FAVORITE
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CHAMPION SPARK PLUG COMPANY

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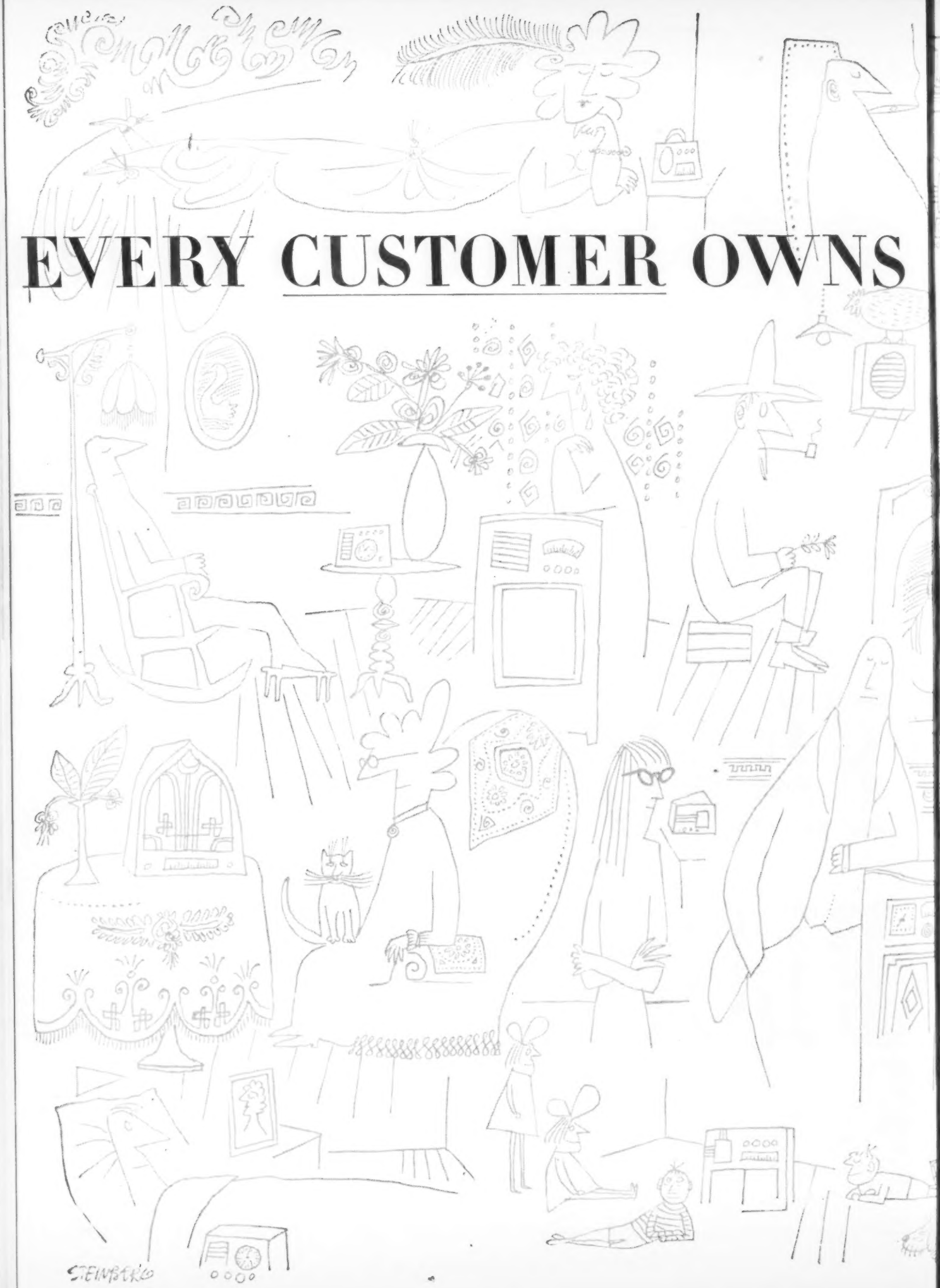

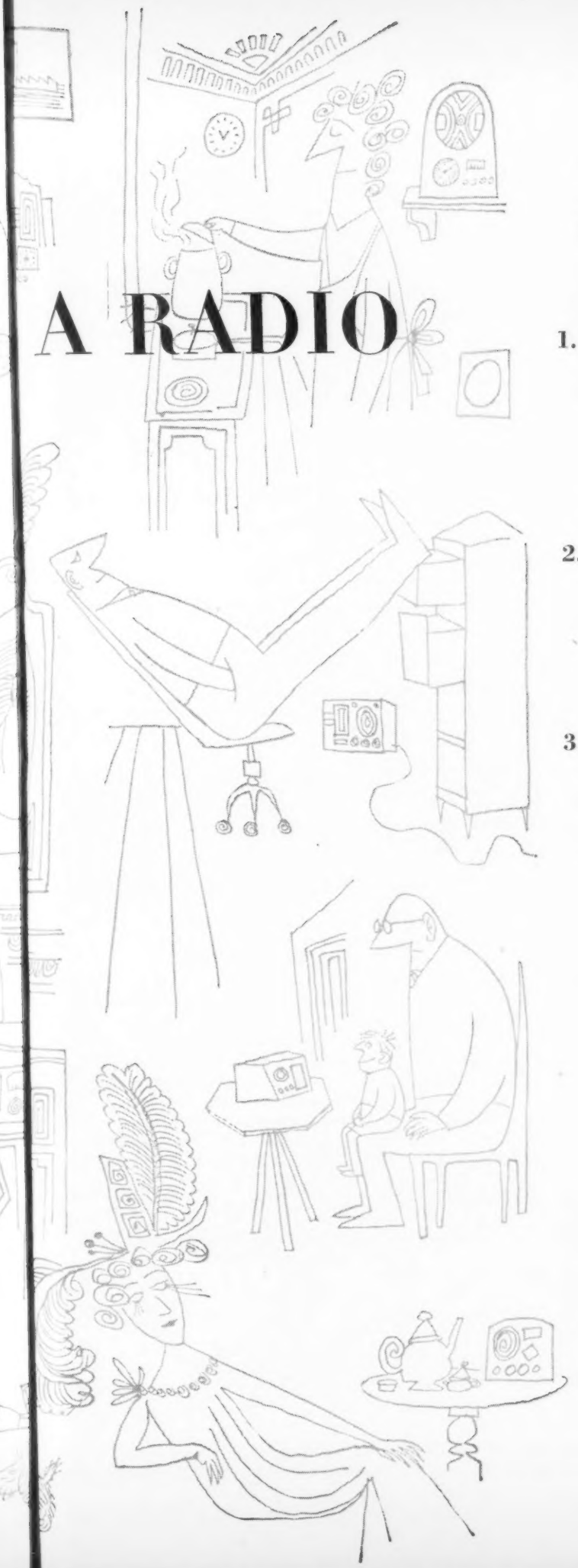

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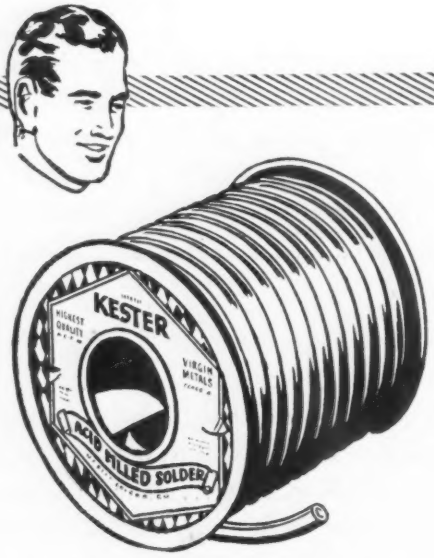
And **CBS** leads Radio in doing it effectively.

COLUMBIA BROADCASTING SYSTEM

IT'S KESTER

For Every

SOLDERING OPERATION



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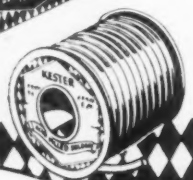
It's Uniform
It's Kester



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MOTOR AGE

With Which Is Combined AUTOMOBILE TRADE JOURNAL

FOR AUTOMOTIVE SERVICEMEN

VOL. LXVII, No. 2 January, 1948

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For more information on this new compact Muffler Stocking and Display Rack see your nearest Maremont Distributor or write to the factory.

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SINCE 1877

MAREMONT MUFFLERS

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NEW SEALED POWER FULL-FLOW SPRING

Featured in MD-50 STEEL OIL RING

BUILDS SATISFACTION THROUGH

6 exclusive advantages!

1 Improved oil economy
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3 Leaves oil slots and oil holes open
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Sealed Power "X" Sets—for all popular makes of cars and trucks—feature the MD-50 Steel Oil Ring—THE ONLY RING WITH THE FULL-FLOW SPRING. Ask your Sealed Power Distributor!

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Sealed Power

PISTON RINGS

BEST IN NEW CARS! BEST IN OLD CARS!

THE ASI SHOW

THE story of what happens at the A.S.I. Show and Conventions is of such importance to the industry that Motor Age devotes this special issue to record for its readers the new products displayed at the show and the merchandising developments discussed at the conventions. To be sure that no item is missed, the entire Motor Age Staff covered the complete show, booth by booth and meeting by meeting. Only by such infinite, painstaking care is it possible to do the complete and thorough job that is necessary. In addition, Motor Age presents its annual Automotive Business Guide to aid its readers in plotting their business charts for the coming year. With automotive maintenance and car sales reaching new heights, the Business Guide assumes even greater importance than it has ever assumed before.

ASI SHOW BREAKS

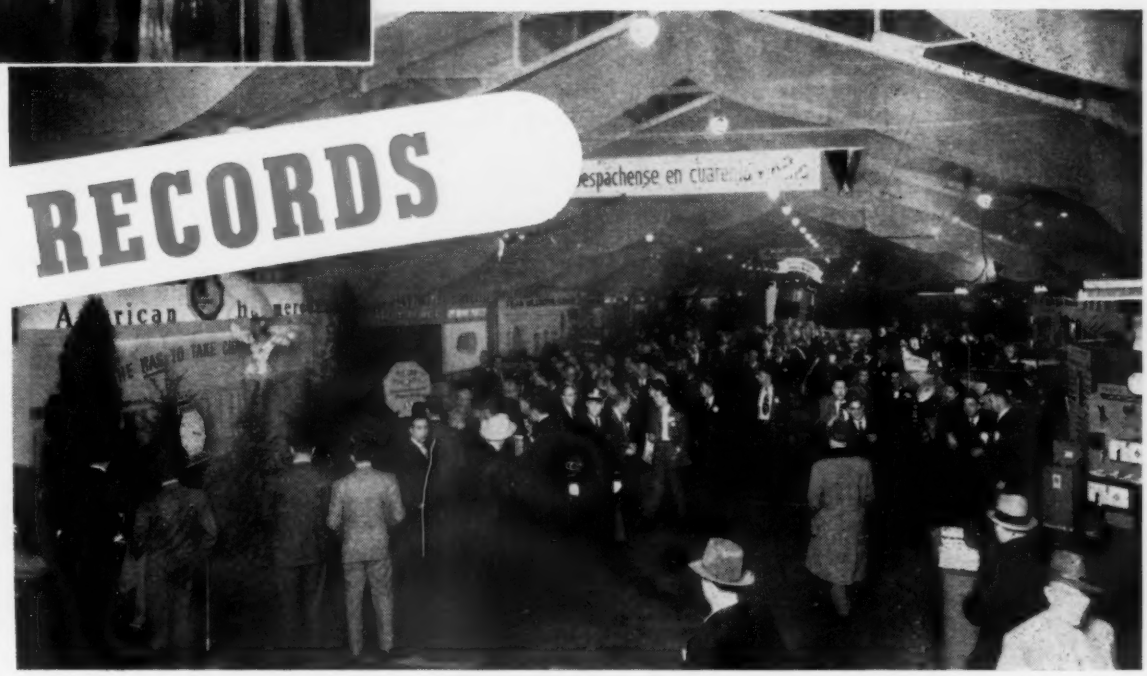
By BILL TOBOLDT

ANYONE attending the 1947 Automotive Service Industries Show in Chicago could not help but be impressed by its tremendous size, its scintillating displays and its record attendance. But these points did not dominate the conversation nor the thinking of the jobbers and manufacturers who attended, neither did the subject of the continuance of the combined shows receive more than passing notice. The subject which did transcend all others in frequence of discussion, was the General Motors parts distribution plan. It was on the program of both the NSPA and MEWA and in addition was studied in smoke-filled hotel rooms, cocktail lounges and show booths. Reactions ranged from complete indifference to considerable consternation. Gordon Walker, of the Walker Manufacturing Co., before the MEWA, advised a more aggressive sales action and improved service for the jobber, while the NSPA made a large appropriation to study the situation.

While details of the discussions on the car factories' parts distribution plan are given in a separate article in this issue, it is interesting to note that the car factory officials emphasize that at present they only get about ⅓ of the total maintenance business and have a long way to go before they reach the halfway point. They also disclaim any intent or desire to force the independent parts manufacturer, the wholesaler or the independent repair shop operator out of the picture and point out that in a free competi-

Attendance records fall as 25,000 automotive wholesalers and representatives examine the products of 483 manufacturers of parts and accessories when they were displayed in eight miles of booths at Navy Pier

ALL RECORDS



tive society it is impossible for a single group to dominate the colossal automotive after-market.

From the standpoint of the associations, the big news of the week was the election of officers of the NSPA, the MEMA, and the Automotive Boosters Club International. The MEWA holds its elections during the Spring. Of particular importance was the announcement that Jack Wiggins, who has been functioning as assistant executive vice-president, is now the Executive Vice-President of NSPA.

Before examining the other subjects discussed at the meetings of the Associations, it will be interesting to analyze the Show itself and the display of parts, equipment, accessories and supplies. This is important because all maintenance men throughout the automotive industry will soon be using the products displayed when repairing the Nation's automobiles.

First of all, the ASI Show just held at the Navy Pier in Chicago, was the largest in history. It was the largest from the standpoint of the number of exhibitors and also the largest from the standpoint of attendance. A. B. Coffman, Show Manager, estimated attendance at over 25,000. In the official "Who's Who," published by MOTOR AGE, 483 exhibitors were listed. Over 162,000 sq. ft. of space were utilized by the exhibitors. Because of lack of space, 21 Associa-

Officers Elected at Annual Conventions

A. E. Keough of John T. Stanley Co., New York, president of MEMA.

B. G. Cochrane of Casco Products Co., Bridgeport, Conn., vice president of MEMA.

C. P. Brewster of K-D Tool Co., Lancaster, Penna., treasurer of MEMA.

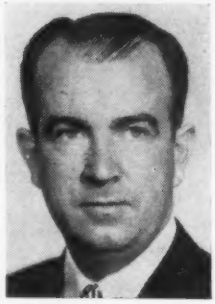
W. M. Albaugh of Thompson Products, Cleveland, Ohio, secretary.

Motor Equipment Manufacturers Association elected the slate of officers above.

Automotive Booster Club International, Inc., elected the following officers: seated (left to right), T. A. Rowe, first vice president; C. L. Broich, president; C. W. Chiles, second vice president; standing (left to right), H. S. Clark, treasurer; D. J. Hartnett, secretary.

NSPA

E. M. Sheehan of Motive Parts Co., Pittsburgh, Penna., president of National Standard Parts Association.



C. P. Crowder of the Van Norman Co., Springfield, Mass., senior vice president of NSPA.

G. W. Kleinschmit of the Automobile Equipment Co., Detroit, Mich., junior vice president of NSPA.

ASI SHOW BREAKS ALL RECORDS

(*Continued from page* 36)

tion members were unable to have exhibits and consequently the Associations are considering limiting space at next year's show so that all members may be accommodated.

Although no one type of product dominated the Show, an observer (passing along the eight miles of exhibits) could not help but note that the industry sees no let-up in the volume of heavy maintenance. There were more crank pin and crankshaft grinders exhibited than ever before and more manufacturers were showing special engine cranes, parts cleaning equipment and other engine repair equipment. Of especial interest were the testing equipment units displayed. Wheel aligning equipment was shown in greater variety than ever before, and types are now available for all sizes of shops.

The Show pointed up another development which is sure to result from the indicated increase in compe-

tition for the replacement parts business. Over a period of years parts jobbers have learned that their machine shops in which they do everything from complete engine overhauls to rebuilding of specialized units have been an important factor in the sale of parts. There was an evident interest on their part in new lines of machine shop equipment. It was obvious that jobbers are planning to augment their mechanical service departments as rapidly as possible in order to improve their competitive position.

New equipment and tools on display have already been mentioned but another interesting development in connection with these products was evident at this Show. Not all wholesalers, in previous years, have been particularly interested in the distribution of equipment but the indicated step-up in competition for the replacement parts business led many of them to inquire for the first time into the availability of equipment franchises. To some extent this also was true of accessories and supplies which formerly escaped the notice of wholesalers interested in parts.

Special attention has been given by the manufacturer to equipment and tools for speeding repair work. Air and electrically-operated tools were much in evidence. An increasing number of manufacturers are offering two-post lifts.

Lots of new equipment has been developed, and the trade is going to see and hear much about it during coming months. Materials shortages, some quite critical, may hold up deliveries on specific types of equipment but look for greatly increased opportunities to modernize services to car and truck owners through mechanical means. This applies to every type of service; tune-up, complete engine overhaul, brakes, body and frame reconditioning including painting and body interiors, wheel aligning, tire service, battery service and cooling system service.

In connection with brake service it was significant that almost every manufacturer of brake lining had something in the way of equipment, either made to his own specifications or the product of a specialized manufacturer, connected with bonding lining to shoes in place of riveting. At the Show a year ago only one bonding equipment manufacturer exhibited and two brake lining manufacturers were investigating the field; but the latest Show indicated that in the service market there has been a great increase in the trend towards bonded linings. We ran into several men who have set themselves up as bonding specialists to serve jobbers and large retail brake shops on an exchange shoe basis. Some of these are operating under the implied blessing of lining manufacturers whose product they use and others are expecting to operate independently. The bonding process has also been extended to include clutch plates. Special jigs are used to hold the plates but the same ovens that are used for brakes are used for clutches.

As evidence of the increased importance that body repair work has taken, more manufacturers are now offering special body repair tools and equipment. This is, of course, the direct result of increased traffic on our highways. In fact, the entire spirit of the Show reflects this greater tempo of all types of maintenance and the products exhibited were all designed and dedicated to turning out more work in less time and at greater profit to the shop operator.

The slogan of the Show was "Accelerate in '48," and banners carrying the slogan in different languages were used as decorations throughout the exhibit. Display booths and decorations were scintillating and new. The cost of many booths ranged up to $10,000 and observers estimated cost of display booths exceeded two million dollars. Obviously, competition for attention of jobbers was great and in addition to elaborate displays, exhibitors used various favors and gifts such as balloons, key rings, apples, smoking pipes, ash trays, neck scarves, hats, note books, pencils, and so forth, as further inducements to attract visitors.

Wherever possible the attention-getting quality of motion was used. Two companies used Punch and Judy shows. The Koppers Company used a tight rope walker. Hollingshead had Miss America and Miss Canada in their booth, while McQuay-Norris used a toy automobile descending a huge spiral ramp. These are only a few of the highly attractive displays. Space limitations prevent descriptions of other equally attractive booths. Descriptions of the new products displayed are carried in a special section of this issue and MOTOR AGE is glad to be able to present them to its readers, together with details of the ASI Show and convention as a special service in this issue.

Attendance at the Show was limited to members of the sponsoring Associations and their guests and the purpose was to acquaint them with the new offerings so that in turn they could be presented to the automotive maintenance men of America.

The convention programs of the Associations were particularly well chosen to meet the problems facing the industry at this time. Paul Wooton, Washington editor of the Chilton Company, gave details of the business picture and how it might be affected by possible future legislation. In particular, he discussed the labor situation and what was happening in Europe.

Walter Kirkpatrick, president of the Automotive Advertisers Council and advertising manager of the Wilkening Manufacturing Co., Philadelphia, discussed how jobbers could extend their services to car dealers and independent shops through advertising.

George Korshin, Henry Trauscht, wholesalers, and Jack Wiggins, executive vice-president of the NSPA, discussed car factory activities in the parts field. These talks are of such interest that they are incorporated in a separate article elsewhere in this issue.

F. J. Maxted, merchandising director of Colliers Magazine, gave a talk on creating a Third Natural Peak of Service. This discussion is of such interest

(*Continued on page* 107)

General Motors Statement

BY MERLE ST. AUBIN
DIRECTOR SERVICE SECTION
GENERAL MOTORS CORP.

THERE has been a great deal of misunderstanding and misinformation about the new General Motors parts distribution plan. Let it be said now that we have no interest in driving any jobber out of business, because we are convinced that jobbers serve a very important function to us and the public in helping keep our cars serviced. Before the plan was put into effect, we consulted with our own jobbers and dealers about the best possible way to protect both their equity and that of the car dealer. Actually, many of the discount features of this new plan were in effect previously, such as quantity discounts which our dealers could obtain from General Motors parts warehouses since 1937. We now have undertaken to rationalize our discount structure in order to give our dealers the opportunity to compete to better advantage with the wholesaler for the parts business of the independent repair shop. We also think that we are entitled to a better penetration of our own dealer market on parts than we have previously enjoyed. Our dealers, too, are entitled to a better break on the parts business to independent repair shops in order to help them carry the overhead on slow moving parts which wholesalers do not stock. However, the discount structure on most items is such that the dealer has the opportunity to compete with the jobber for the replacement parts business of the independent repair shop, although in some lines his competitive position is not quite so good as that of the jobber.

There will be stiffer competition for jobbers in certain areas under the new plan, but we do not expect it to drive them out of business. Naturally there has been some anxiety among wholesalers of parts over the effect of this new GM plan on the whole parts distribution industry. We feel, however, that within six months or a year from now our objectives will be more fully understood and that the plan will do much to stabilize the parts industry.

Associations Discuss

EVERY possible shade of opinion on the new General Motors parts distribution plan was expressed by the automotive jobbers and independent parts manufacturers at the annual ASI Show in Chicago in December. Members of participating associations came from all parts of the United States to attend the Show and Conventions and in most instances came to get the "low down" on GM's new parts plan announced November 1. "Is it good or is it bad?" and "What is going to be done about it?" were some of the queries association members had in their minds as they arrived in Chicago. When they left one week later, the consensus was that while competition would undoubtedly be a great deal stiffer than ever before in the parts and jobbing industries, that a full line of parts, good service, and ability to concentrate on just the sale of parts without worrying about car sales were an unbeatable combination.

Certainly maintenance men and car dealers will benefit under the present situation as there are many indications that the independent parts manufacturers will, in many instances, meet the increased discounts of General Motors, and furthermore, service from all forms of parts distribution systems will undoubtedly raise to new heights.

It was natural that many wholesalers should look to their associations, and particularly to the manufacturers whose parts they carry, for a solution to the situation.

At the MEWA meeting the subject was handled as a panel discussion, and at the NSPA meeting it was the subject of several speakers. In general, most of those attending the Show decided that it was too early to note definite results but most were quite definite in believing that competition from 20,000 car dealers could not be ignored. The

The panel at the left made an analysis of car factory parts distribution plans for Motor Equipment Wholesalers Association at the annual convention session.

GM Parts Plan

MEWA and NSPA both weighed the problem of competitive distribution which the GM Parts Plan now has created

by CHARLES M. KENYON

NSPA appropriated a large sum to study the situation and then make such recommendations as would be necessary.

At the panel discussion of the MEWA it was pointed out that Chevrolet dealers have been in a competitive position with jobbers for a long time and Buick also has had a special arrangement to encourage wholesaling of parts. The new feature of the plan is a better organized effort and improved discounts.

Several manufacturers stated that while they most emphatically were not going to enter a "discount race" their price and discounts would be competitive.

Several wholesalers in both the MEWA and NSPA stated that once more the controversy of "genuine" parts had come to the fore, but others pointed out that during the war car factories could not supply parts and car dealers purchased their parts from automotive wholesalers thereby giving them their stamp of approval.

In reply to the query as to why

(*Continued on page* 110)

C. C. Tapscott, advertising manager of McQuay-Norris and member of the Board of Directors of NSPA

Jack Wiggins, executive vice president of the National Standard Parts Association.

MEWA Votes Confidence in Whatever Stand Directors May Take

by ***WHIT RUARK***

Whit Ruark, General Manager of the Motor Equipment Wholesalers Association.

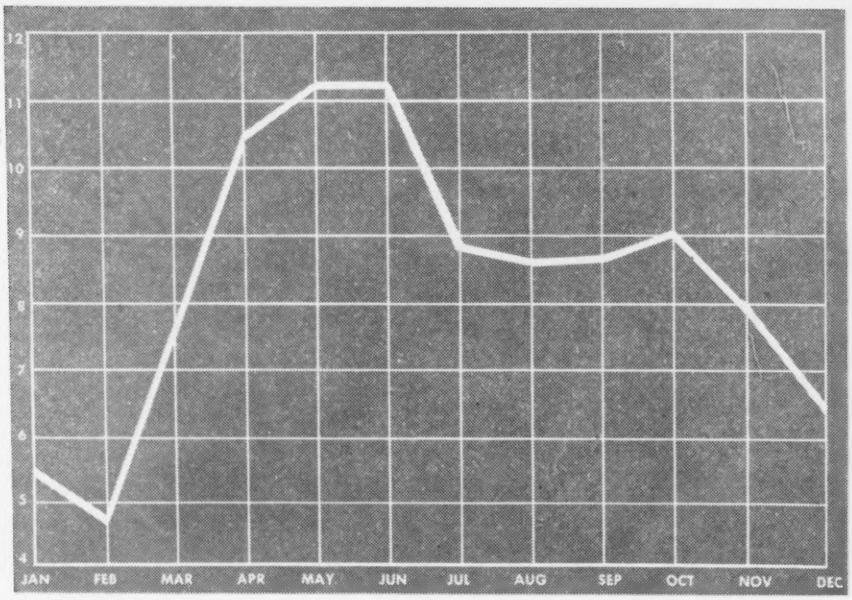
MEMBERS of the MEWA voting at their Chicago convention, December 5 and 6, 1947, gave an overwhelming vote of confidence to their Board of Directors by an affirmative vote of 92 per cent on the proposal that the Board be empowered to withhold the Association's sponsorship of future ASI Shows and to conduct shows under the auspices of the Association provided the Board deems it necessary to do so in order to provide maximum possible show benefits to members.

The Association's membership, now in excess of 860 firms, the great majority of which were present, represents more than 4000 wholesale automotive outlets throughout the United States and Canada.

The ballot on which members voted and which was worded so as to enable them to go on record for or against the principle involved and for or against leaving further determination of the matter in the hands of the Board reads as follows:

> "Shall the Board of Directors of Motor and Equipment Wholesalers Association be empowered specifically to withhold the Association's sponsorship of ASI Shows in 1948 and succeeding years and to conduct shows under the auspices of the Association itself—if in the opinion of the Board the ASI Shows are not conducted in such manner as to provide maximum possible benefits to members of the Association and shows under the auspices of the Association are necessary for the providing of such maximum possible benefits to members?"

MEWA President Meyer stated in his convention address the hope that differences between the ASI Show sponsoring associations which gave rise to the issue could be reconciled. This same hope was expressed by Board members and by General Manager Ruark in the presentation and discussion of the subject that preceded the voting of members. The general feeling seemed to be that appropriate ways and means of accomplishing such result would be found. On the other hand, it is realized that the impressive 92 per cent affirmative vote recorded in the balloting indicates the need for thorough consideration of ways and means by which a joint show can be brought more in keeping with MEWA members' opinions of what benefits such a show should provide for them.



The chart on the right is a graphic presentation of the annual cycle in automotive service sales. Note the spring and fall peaks and the summer slump.

F. J. Maxted, Merchandising Director of Collier's, the National Weekly.

Service volume can be continued at the high level set in spring if independent shops and dealer agencies sell safety maintenance during the summer months . . . by F. J. Maxted

COLLIERS Promotes Third Service Peak

THE automotive industry now has two natural peaks of service—Spring and Fall—during which nearly all manufacturers, wholesalers and dealers join together, in advertising, display and promotion in a very successful sales promotion but during the summer months the industry does not enjoy the power of a common theme, on which all can concentrate. We therefore would like to have you consider what could be accomplished if you combined to create a Third Peak of Service.

This idea comes to me because I spend a lot of time working on Collier's campaign for Preventive Service. "P.S." is a Public Relations program, designed to establish a conviction among automobile owners that proper Service for the car is important—and that by practicing *Preventive* Service they avoid needless risk —inconvenience—and oftentimes unnecessary expense. Naturally, therefore, we think of Service in terms of public education, as well as in terms of selling, and it is possible that our viewpoint may be of some assistance to you in the industry.

I wonder if you realize how little your Industry does in the way of presenting the Public, on a non-commer-

(*Continued on page* 90)

A TOUR THROUGH

1

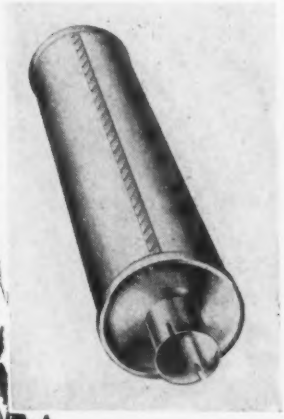
Bear Manufacturing Company's 190-82 complete frame and alignment machine for 1948 will include a number of new and improved tools. Designed to handle all frame straightening as well as front end and steering work on all passenger cars and light trucks, this unit makes it possible for any repair shop or dealership to offer complete alignment service in a small amount of space. Bear's new pull car assembly is included among these tools to anchor a car or truck more securely on the rack for frame or front end operations.

2

Maremont Automotive Products, Inc. has just announced their new line of "Maraloy" Mufflers. Made of premium steel these replacement mufflers are offered to supplement the company's regular cold-rolled steel line of mufflers. The "Maraloy" steel used in these mufflers is described by the manufacturer as corrosion-resistant and the mufflers are of the straight-through type, the three-pass oval type or the three-pass round type.

3

Barrett Equipment Company is marketing a new streamline all steel welded oven for baking brake lining to brake shoes. This electrically heated, thermostatically



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THE ASI SHOW OF *NEW* PRODUCTS

controlled unit includes pilot light and automatic timer and is capable of holding a temperature of 500 degrees. The oven is insulated with two inches of thick high grade insulating material. Adjustable flexible spring steel bands and spreader hold the lining and adhesive on the brake shoe during the baking operation.

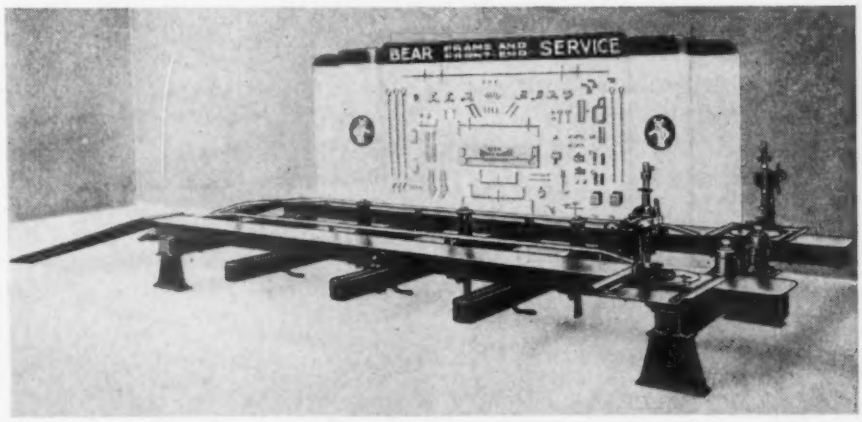
4

Automatic Radio Manufacturing Co. have introduced a new car radio designated Model M-86. A six-tube superheterodyne set operating from six-volt auto battery, this set features single unit construction and universal mounting. It is designed to fit all cars. It has tuned R. F. stage and three-gang tuning condenser plus permanent magnet dynamic speaker with Alnico No. 5 magnet. Tuning is on a full vision slide rule dial and there is automatic volume control.

5

Raybestos Division of Raybestos-Manhattan, Inc., has announced a new wire molded brake material which is stated to be proof against warping and curling. Incorporating a harder surface, this new material is boxed in drilled and countersunk sets for easier sale and identification. A new packaging program using a red, black, and white container is being initiated in conjunction with the introduction of the new Wire Molded Lining.

These new products were designed to help Motor Age readers make greater profits during the coming year. Many were shown for the first time to the nation's wholesalers at the Automotive Service Industries Show in Chicago. If more information is desired, use the coupon on page 53.



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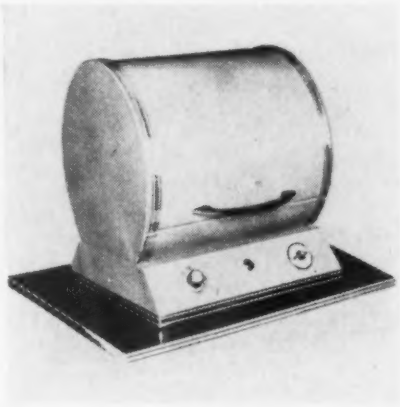

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A TOUR THROUGH THE ASI SHOW OF

NEW PRODUCTS

(For further information use coupon on page 53)

6

Grote Manufacturing Company's newest additions to their line of safety devices include new fog lamps and backup lights. The fog lamps, equipped with the new car-size Mazda sealed beam units, are available in two types. One type is fitted with pedestal and washers for top of pan installation while the other is designed for bumper arm mounting with standard clamp type bracket. The backup lamps are styled to match new car design and have body and door of polished nickel-chrome finish on brass. They have clear 4 inch Plexiglas lens and can be fitted on top of the pan or on the bumper arms.

7

J. W. Speaker Corporation have introduced the new Speaker All Weather Radiator Front. This Radiator Front combines a bug screen and adjustable winter shield into a dual purpose unit. It fits inside the radiator grill, therefore does not mar the front end appearance of the car. It is controllable from the driver's seat, mounting in the glove compartment. The self-cleaning two way wiping action removes bugs and insects from screen in summer and the edge of the spring motor housing wipes mud and snow from the shield in the winter. The aluminum screen and frame are corrosion proof and the automatic metal spring motor is enclosed in rustproof housing.

8

Stewart-Warner's new South Wind gasoline burning, cargo-type heating and ventilating units, are designed to service all makes of commercial motor transports. Combining automatically controlled, modulating type heat distribution with fresh air ventilation, these units afford remote control for the driver to comply with Interstate Commerce Regulations. Also featured is the South Wind "Custom-built" automotive heating and ventilating system for passenger cars, which provides all the advantages of automatic temperature control and forced fresh air ventilation. This deluxe heater is specially designed for installation under the vehicle hood.

9

Bendix Products Division, Bendix Aviation Corporation have introduced a new Stromberg carburetor, the AAVS-267. This carburetor is a double barrel, down-draft model with automatic choke control built-in starter switch. The starter switch, employing manual and vacuum actuation, enables the operator to start the engine by depressing he accelerator pedal.

10

Champion Pneumatic Machinery Company is featuring its 4 cylinder, V type, two-stage, automatic air compressor. For use in large garages and car dealer service shops, this compressor is especially designed for operation of multiple installations of air lifts, pneumatic greasing systems, inflation of bus and truck tires and other heavy work. Featured on this unit are multiple V belt drive, fully enclosed crankcase and centrifugal unloader, copper finned inter-cooler, and across-the-line type of automatic starter when the unit is furnished with A.C. motor.

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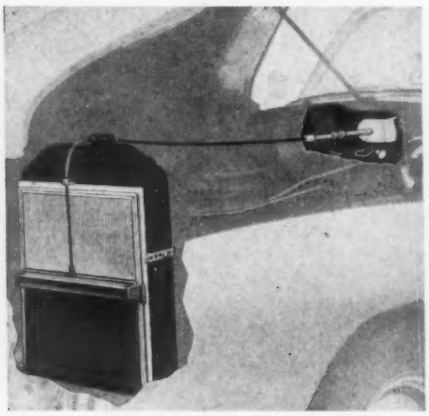

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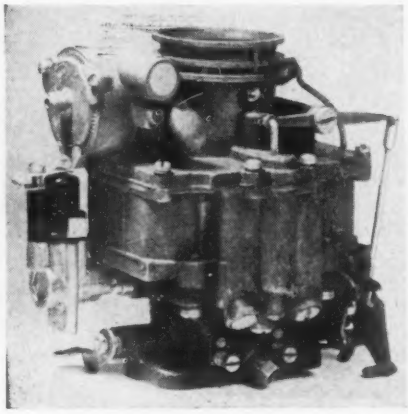

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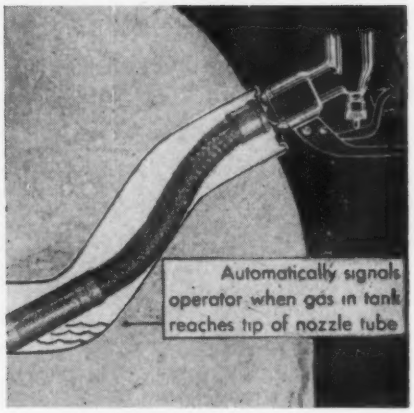

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11

Imperial Brass Manufacturing Company's latest product is a flexible gasoline nozzle attachment, which automatically signals the operator when the motorist's tank is full. The purpose of this nozzle is to speed service and reduce the chance of blow backs. Forged tube fittings and shut-off valves for gas and oil line work and flexible fuel lines are also being featured in the Imperial line. New merchandisers for these products are being offered as well.

12

Covel Manufacturing Company is now producing the Benton Power Hack Saw for garages, body shops and welding shops. This saw is constructed of alloy iron rather than of lighter metals. It incorporates an automatic power shut-off which stops the machine unattended when the cut is completed.

13

Reaume-Kerkling Company is distributing the new Rocket Hydraulic Brake Booster. Made of Anodized Duralumin, this booster is a thick-walled cylinder measuring slightly under six inches overall in length and under two inches in diameter. It is installed between the master cylinder and brake lines and involves no change in the hydraulic engineering of the car. According to the manufacturer this booster increases braking efficiency and helps to equalize braking effort while prolonging the life of the master cylinder and brake linings.

14

Breeze Corporation Aircraft Standard Parts Company Division is featuring the new "Aero-Seal" Junior Assortment Kit. This Kit contains 110 "Aero-Seal" Hose Clamps. These clamps employ a worm drive principle of operation, provides added strength and uniform clamping pressure on all types of air, water and coolant lines, according to the maker. It can be installed without removing the hose, is vibration proof and has no loose parts.

15

Ruger Equipment Company, Inc., is featuring the Ruger 10-ton, portable Hydraulic Arbor Press. Having total weight of 100 pounds, this unit is completely portable and the length of strokes of the operating lever completely adjustable. A pressure release valve is located along side pump operating lever. The unit includes table with cut-outs properly spaced and with holes for positioning V-blocks.

16

Auburn Spark Plug Company, Inc., has introduced its Model 48 spark plug cleaner which is controlled by a brass foot-valve, leaving both hands free for cleaning plugs. It incorporates a built-in tray, providing adequate space for plugs before and after cleaning, and a place for storing adaptors of various sizes. These adaptors automatically locate any size or make of spark plug in exact position for cleaning. A Gapping Tool and Gage are permanently attached to the cleaner

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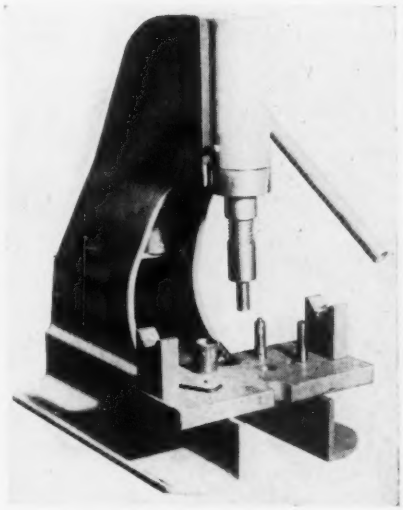

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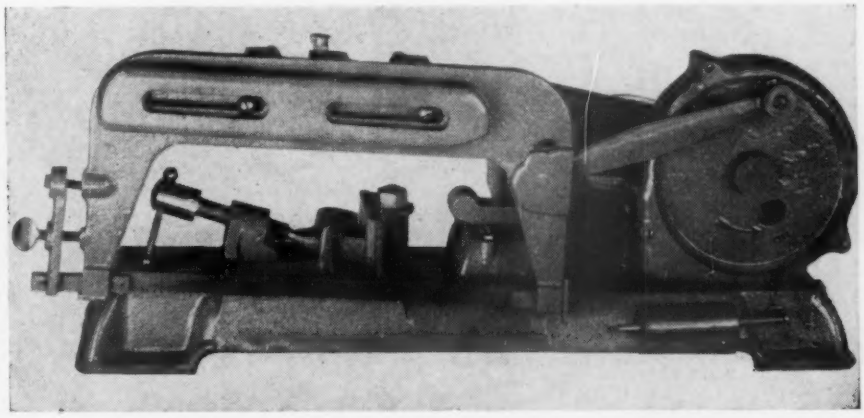

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A TOUR THROUGH THE ASI SHOW OF

NEW PRODUCTS

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17

A. Schrader's Son are using their #5050 Tire Gauge as the basis of their Comparative Air Loss System. The main feature of this plan is the owners' regular use of a Tire Gauge on his tires to prevent under inflation and the resulted damage that it does to tires and tubes.

18

Heckethorn Manufacturing & Supply Company is manufacturing the Heco Quick Connector for hoses conveying air, oxygen, acetylene and liquids. Features of this connector include a patented synthetic rubber "O" Ring packing to provide more positive shut-off, a suction fitting which allows the hose to swivel freely without loss of air, and positive shut-off when the coupling is separated and easy snapping for connection.

19

Chicago Pneumatic Tool Company has brought out a new automotive air compressor. This compressor is a two-stage, air cooled, 7½ or 10 hp. unit. Both tank mounted or base mounted models are available with a choice of 175 or 110 pounds cut-out pressure. Chief feature of the new compressor is its "dual control." With this feature manual throwing of a selector switch gives a choice of automatic start-and-stop, or of continuous operation.

20

Kaywood Products Corporation have augmented their Red Line Tools with an axle aligning tool of new design. With this aligning tool it is possible to check the spindle alignment without removing the spindle from the car. It is only necessary to remove the axle nut and wheel and slide the self-adjusting aligning tool over the spindle. The indicator is set at zero and the aligning tool revolves around the spindle, checking it for misalignment. The tool may be furnished with or without the indicator.

21

Ingersoll-Rand is continuing to feature its universal electric, all-purpose Impact Tool. Using standard attachments this tool will apply and remove nuts, drill, ream, tap, drive and remove screws, extract broken cap screws and studs, run wire brushes and other types of shop work. Designated as the 4U this unit delivers 1900 rotary impacts per minute under load. In operation it runs like any conventional electric tool until the resistance to spindle rotation reaches a certain point. Then a patented mechanism converts the power of the motor to rotary impacts which permits the spindle to be stalled completely while the motor continues to run and eliminates chalk reaction to the operator.

22

Butler Engineering Company is featuring the Butler Model AT1 Automotive De-Scaler which is described as a spring-and-core unit to be fitted into the top hose connection of the radiator. This unit removes old scales and prevents the formation of new scales by means of electrolysis. It is claimed that it is also effective in preventing corrosion of various types. The product is guaranteed to keep cooling system clean for one year or 25,000 miles.

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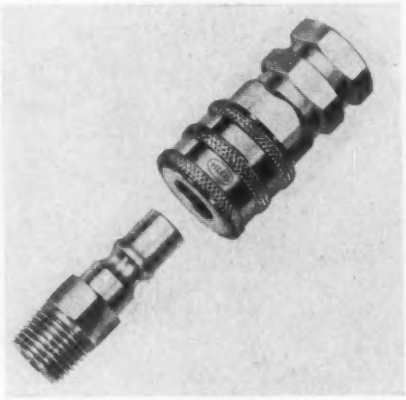

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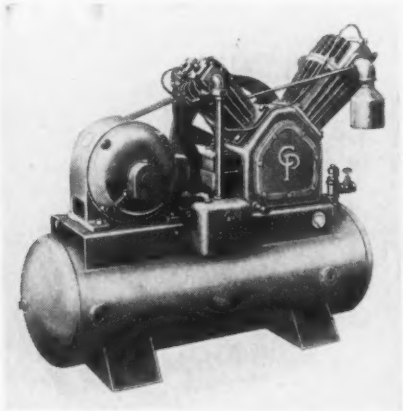

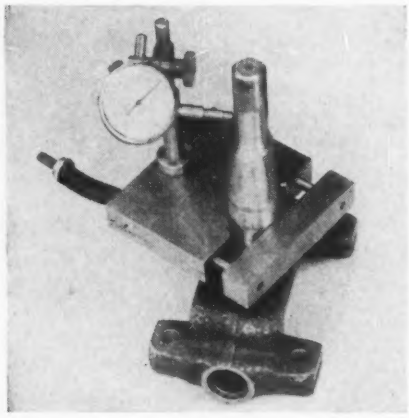

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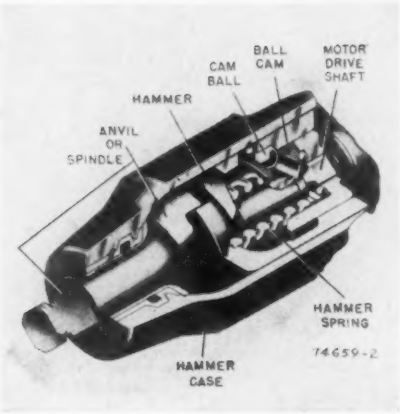

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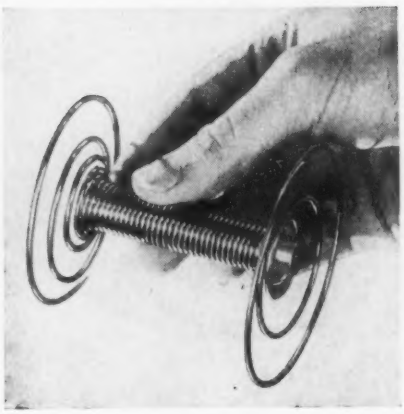

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23

Trico Products Corporation has introduced a new wiper blade for curved windshields, the Trico "Rainbow." With a "vertebrae" that flexes to conform to the contour of the glass, the "Rainbow" curves or flattens to maintain wiping contact throughout its arc of travel as the shape of the contour changes. A yoke-type connector applies pressure which is transmitted evenly throughout the entire length of the flexible blade. The rubber wiping edge is resilient enough to lay over slightly on its edge so as to present the correct wiping angle as it operates. Coupled with the blade is Trico's new "wrist-action" connector which produces an improved reversing action at the end of each stroke.

24

Ammco Tools Incorporated has introduced the new Ammco Honing Machine for precision honing of all bores within the range between .720 inches and 2.062 inches. This unit uses only two honing heads which are interchangeable. The Ammco will hone wet or dry and features an Aligning Guide, an attached Pin Vise and a graduated adjustment dial for obtaining proper head sizes.

25

Dumore Company has added a new electric hand-grinder, the Duplex, to their line of precision tools and grinders. The Duplex is a dual-purpose tool for use either as a straight hand-grinder or with an attachment which converts it to a flexible-shaft tool. The flexible - shaft conversion - attachment includes a bail or hanger, in which the Duplex is clamped, a 36 in. flexible shaft which chucks into the Duplex and a choice of three different handpieces. A 1/14 hp. motor supplies the power for this tool.

26

Union Carbide and Carbon Corporation has introduced six new products. The hand-operated cutting blowpipe for use with the power-cutting process has been developed especially for cutting oxidation-resistant materials such as stainless steels. The portable Unionmelt welding machine is built especially for welding light-gage sheet and light plate by the Unionmelt process. A power-cutting attachment for the standard Oxweld C-39 now makes it possible for the C-39 blowpipe to cut oxidation-resistant materials. A new attachment which makes oxy-acetylene circle-cutting possible to the extreme edge of a plate in the corner of any plate has been developed. The other new items are a water-cooled "Heliarc" torch for inert-gas-shielded arc welding, and a new shutoff valve.

27

Arnolt Motor Company is offering the Ivalite remote control Spotlight. This Spotlight mounts on the right hand side of the car and operates on the dash within reach of the driver. The revolving head makes complete, continuous revolution. Available with red or amber lenses and for 12-16 volt bulb equipment, it uses an all glass Mazda Sealed Beam spotlight unit.

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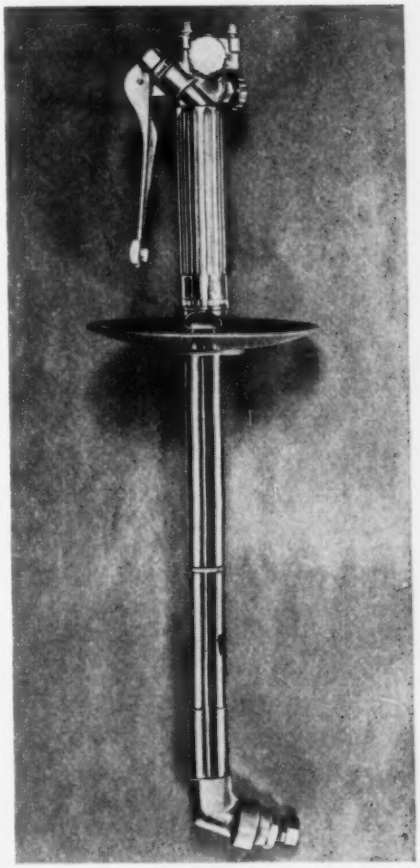

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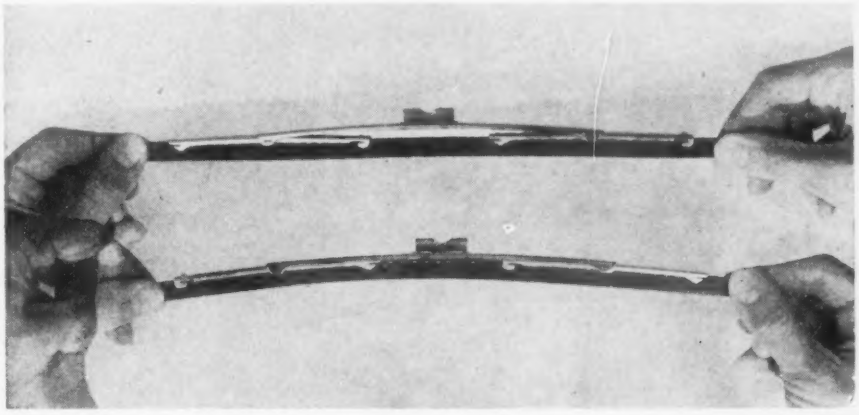

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A TOUR THROUGH THE ASI SHOW OF

NEW PRODUCTS

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28

Westinghouse Air Brake Company, Industrial Division is producing its T-1 Air Compressor. A light weight, compact unit, the compressor is designed for truck or tractor engine mounting with belt drive from the generator pulley. Displacement is 3.27 CFM at 600 RPM. Drive is controlled by an automatic centrifugal clutch. When the compressor is used the clutch is engaged manually by slipping a pin and automatically disengaged by speeding up the engine. Oil free air is supplied as lubrication is by heavy grease. Complete kits are available for current models of ½ to 1½ ton trucks.

29

L. J. Miley Company has announced that its new bonded brake shoes are now available to the replacement trade. These Mileybond shoes consist of Miley Black Gold metal base brake lining bonded to Miley made brake shoes directly by a heat setting resin, which does not soften up after setting. Miley is planning to increase production of these Mileybond units as fast as the demand arises. They are continuing their line of standard Miley Brake Shoes and have added several new numbers for late model Plymouth, Dodge, DeSoto and Chrysler cars.

30

Curtis Manufacturing Company has resumed manufacture of the Curtis Oil-Locked Rotating Automobile Lift. Improvements in design in this model include a formed steel, all-welded, open side runway roll-on-type platform and fully automatic stop checks. A Self-Leveling free-wheel type platform, enclosed box girder platform bolsters, grease-lubricated, self-cleaning, rust-proofed and non-scoring stuffing box gland ring, and guide bearings are also incorporated.

31

Sparks-Withington Company has added two new products to its Sparton line, the Sparton Pal and the Sparton Portable Utility Hoist. The Sparton Pal Portable Auto Lift has been developed especially as an auxiliary hoist for garages and service stations. This one ton unit occupies 2½ x 3 ft. of floor space and mounts two swivel hooks separated by a cross bar to fit front or rear bumpers. The portable Utility Hoist has a one ton capacity, a three position crank and a "Free wheeling" unit to disengage the drum.

32

Continental Piston Ring Company, manufacturers of Steel-Flex Piston Rings, is featuring the new Continental coated ring. The very thin coating on this ring is described by the manufacturer as having definite lubricating properties during the break-in period and as having rust preventive action. A new packaging plan is also being used by Continental.

33

Philco's car radios for 1948 feature a new electronic system of tuning. According to Philco the push button control system made possible by this type of tuning is fool-proof and jam-proof. Five of the six buttons on the

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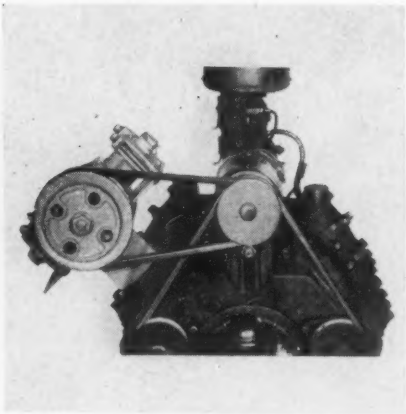

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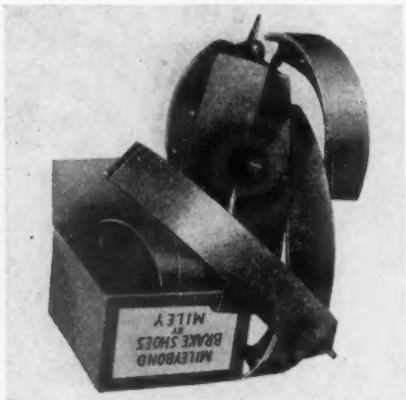

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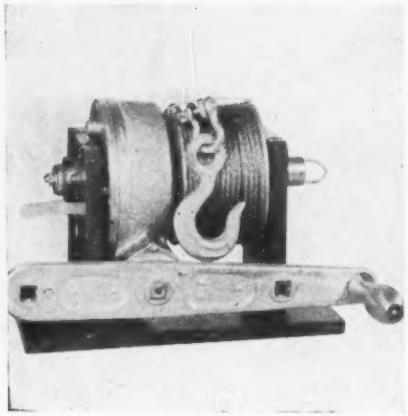

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dial are pre-tuned, while the six buttons permit manual tuning. The new Philco Foot Control permits tuning by pressure of the foot on a knob placed between the brake and clutch pedals.

34

Safety Equipment Company has announced the availability of the new Bennett-Feragen Model CA-17 Wheel Alignment Rack, for use in conjunction with the Bennett-Feragen Wheel Alignment Floor Sets. Designs of this Floor Set is based on the premise that the small shop owner can best acquire his wheel alignment equipment piece by piece. Also available with the new rack are special groups of correction tools for wheel alignment repair work. These groups include straightening tools, knee action camber correction tools and special jacks.

35

Lisle Corporation have introduced a new hydraulic brake cylinder hone. A flexible driver allows access to difficult positions, permitting work on both master cylinders and wheel cylinders on the car. Abrasives are supported on adjustable springs which apply sufficient pressure to permit metal removal where necessary and at the same time give a high polish. The Lisle hone is supplied with two sets of stones which will handle a range of from 1 in. to 1½ in. The stones are self-aligning and an external adjusting nut is fitted to make possible expansion of the hone without removing the driver.

36

Electric Heat Control Company is featuring, among its line of engine testing instruments, the King Motor Tester DeLuxe. Using fluorescent lighting to illuminate the panel and mounted in a modernistic cabinet with locking type casters in the front, this Motor Tester tests coils, condensers, spark plugs, cam angle, rpm., gas analysis, vacuum, fuel pump, and so forth. All meters are of the D'Arsonval precision moving coil type.

37

Pyrene Manufacturing Company is featuring various types and sizes of Pyrene fire extinguishers of the vaporizing liquid, foam, soda-acid, pump tank and cartridge-operated water and anti-freeze types. The carbon dioxide type extinguishers are made in hand, wheeled, and hose types by Pyrene affiliate, the C-O-Two Fire Equipment Company. Pyrene is also marketing three types of tire chains, regular highway type, the extra heavy mud type, and the bar-reinforced type.

38

Campbell Hausfeld Company is now producing the Pressure Queen 4 cylinder Air Compressor and Spray Painting outfit. This portable spray painting outfit, powered by ½ hp. electric motor and equipped with spray hose, gun, grease gun and blow gun, is designed for handling touch up jobs and most jobs of cleaning and lubricating chassis and engines of automobiles, trucks and tractors. It is also suitable for tire inflation.

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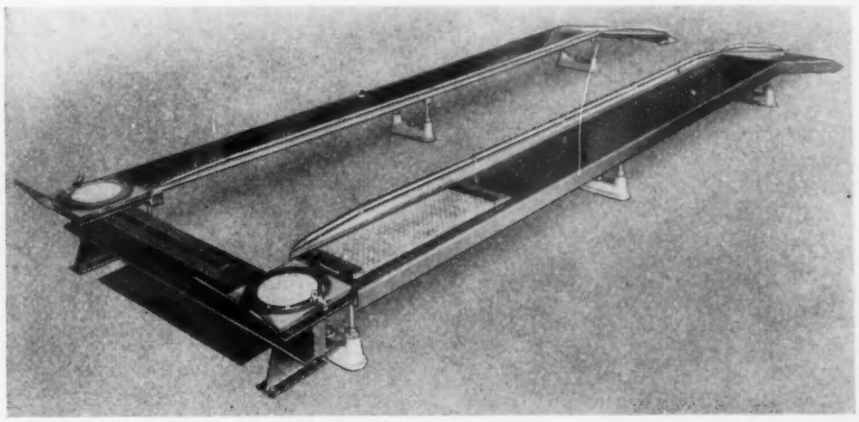

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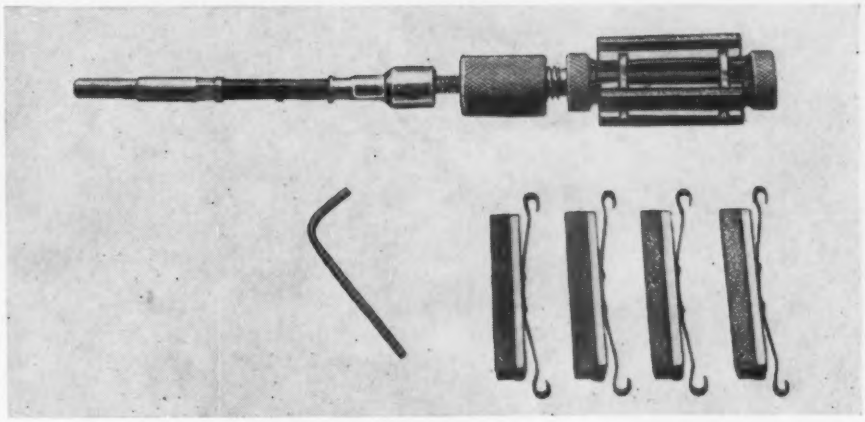

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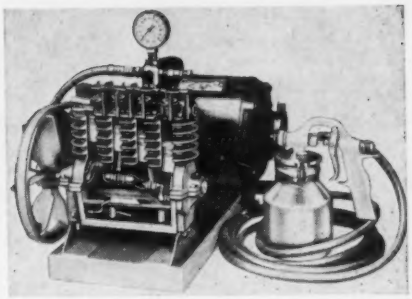

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NEW PRODUCTS

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39

Penrose Products Co. are manufacturing the Penrose Brake Holder for use on any car, truck or bus equipped with hydraulic brakes. This unit consists of an electrically actuated and controlled hydraulic valve, a Finger-Flick switch mounted on the gear shift lever, a throttle switch connected to the foot throttle mechanisms and a relay for the control of the electric circuits. In operation the Brake Holder will hold hydraulic pressure applied by the operator's foot on the brake pedal with a Finger-Flick on the control switch. It will release brake pressure instantly when the foot throttle is moved and work on any grade, up or down.

40

Weaver Manufacturing Co. is producing an improved Truck and Bus Wheel Dolly for removing, lifting, transporting and replacing heavy dual and single wheels. In operation the lifting arms may be lowered for picking up the wheel off the floor or may be raised under the jacked-up wheel to remove it from the spindle. Replacing the wheel is done by raising it to spindle height and turning it on the roller arms until bolt holes meet or keys meet keyways. Strong chain holds the wheels upright. This dolly has 1200 lb. capacity.

41

Kwik Ezee, Inc. is featuring in its line of front wheel alignment equipment, the M1 unit and Kwik Ezee Front Wheel Alignor. The M1 unit includes camber caster micrometers, turn indicators, anti-friction plates, toe-bar, toe-in pointers, and assorted compensators with nuts and bolts. The Kwik Ezee Front Wheel Alignor is a gage that fits on the flange of the front wheel hub and permits readings of camber caster and toe-in.

42

Mall Tool Company is featuring a drill for use in wood, steel or concrete that can be used with attachments for polishing, sanding, grinding, or sawing. Weighing five pounds, it is powered by a universal motor available for operation on 115 volt AC-DC or 230 volt AC-DC current. It is fitted with precision ball bearings on all shafts, blower type ventilator fan, die cast aluminum alloy housings and 3 jaw, geared chuck. It has a ⅜ in. capacity in steel and concrete and ¾ in. capacity in wood.

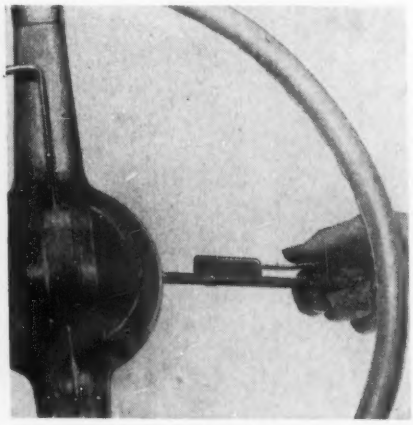
43

Aluminum Industries, Inc. have developed a new pump to be known as the Permite Aluminum Water Pump. This pump duplicates the manufacturer's original pump but is made entirely of aluminum and is therefore rust free. It weighs 2 lb. 11 oz. less than its counterpart in cast iron and has a ball bearing mounted impeller shaft and a specially designed sealed spring to insure positive compression.

44

Bowes "Seal Fast" Corp. have augmented their line with several new units. The 1948 model Lectroseal now features a built-in automatic timer and a toggle switch which can be used in place of the timer when a serviceman desires that arrangement.

39



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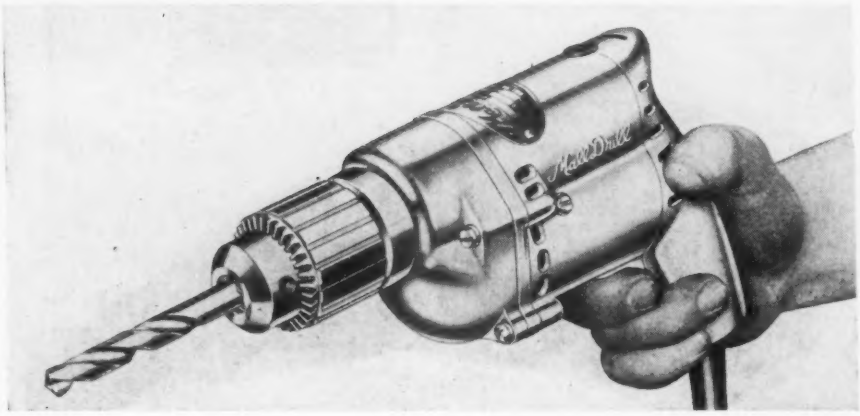

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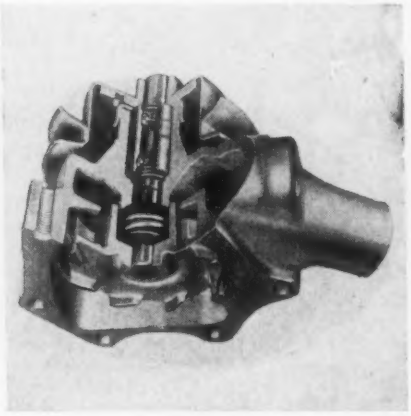


43

Another featured item is a spark plug tester and cleaner unit that provides complete equipment for servicing the plugs plus a work table and a storage cabinet for tools and stock. Rounding out the Bowes line are "Rust-Rout," a recently developed radiator cleaner, and an automatic timer suitable for use on the Lectroseal outfit already in use.

45

Synchromatic, Inc. has introduced a new Distributor Plate that, according to the manufacturer, adjusts the points to proper gap at all speeds. This unit eliminates the 3 balls normally used and the groove or raceway normally used in conjunction with these balls. It automatically advances and retards the spark with the breaker plate held rigid and stationary and has a longer coil build-up time at high speeds. No alterations are necessary in its installation.

46

Oltman-O'Neill Company is featuring welded all high tension steel truck bodies that are available in 9, 12, 14, and 16 foot lengths. The newest addition to the line is the low priced "Packette," an all-purpose package delivery job designed for mounting on any flat-faced cowl chassis of 128 to 137 inches wheelbase. The cargo space is 306.8 cubic feet.

47

Sight Feed Generator Company has introduced a line of completely redesigned and improved Carbide Acetylene Generators, featuring lighter weight, greater portability and maximum safety. The sight feed visible supply hopper has been reduced in weight by the use of steel stampings. This, plus the use of new pneumatic rubber tired trucks, results in greater portability for the unit. A Sight Feed Safety Check is standard equipment and the generators are available in four sizes.

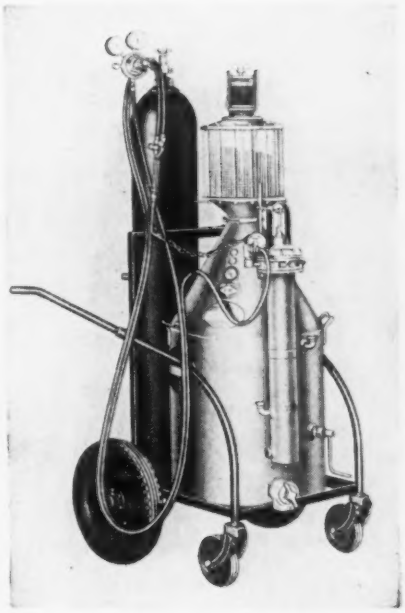
48

Gray Company, Inc., is featuring the two newest products in the Graco line, the Graco Brake-Fil and the Graco Oilmaster. The Brake-Fil is a self-contained unit and is not powered by compressed air, being operated by a coil spring and hydraulic piston. The Oilmaster is also self-contained and is electrically powered. It holds 60 gallons of motor oil which may be tapped by a finger-tip control while the meter records sales.

49

Rotary Lift Co. is featuring its model 27-SL Shop Lift, designed specifically for car dealer and garage use. This lift features accessibility to under-car parts, fast loading, simple controls, flexibility, and a "U" shaped front support allowing free access to knee-action fittings when located center-wise between wheels, according to the manufacturer. All pressure lines are of steel pipe and there are no flexible connections. It is not necessary to build concrete forms when installing this lift, because the housings around each plunger are in themselves complete boxes and it is only necessary to position the housings.

47



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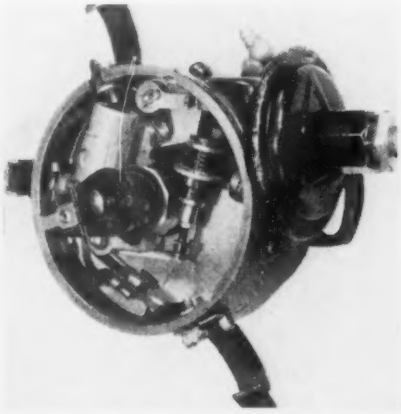

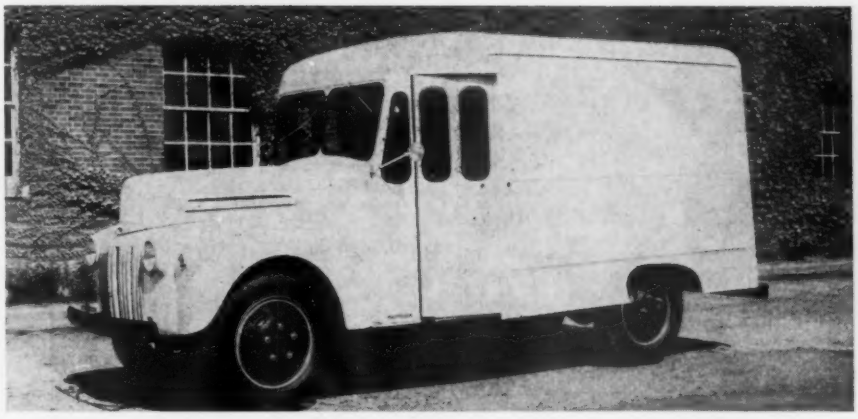

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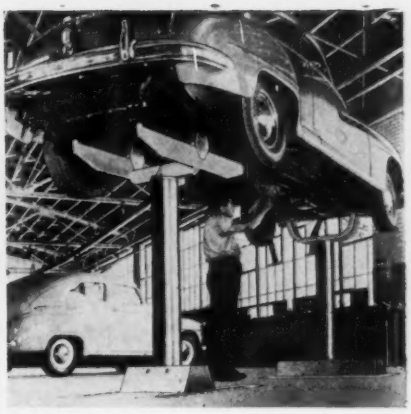


49

A TOUR THROUGH THE ASI SHOW OF

NEW PRODUCTS

(For further information use coupon on page 53)

50

Owatonna Tool Company has designed a new floor display that is built for location on the display floor to increase the sale of tools. Designed with royal blue as the basic color, chrome trimmed and streamlined in design, this floor display is 48 in. long, 36 in. wide and 35 in. high. Four doors, two on each side provide access to a stocking compartment inside. The table carries a varied assortment of tools including the OTC puller line. This unit will be available to OTC distributors about the first of the year.

51

Sun Electric Corporation has introduced three new models. These include the Master Model Motor Tester, the Master Model Distributor Tester and an Oil Pressure Tester. The Motor Tester operates entirely on a 6 volt storage battery and is completely self-contained and portable. Indirectly lighted, alnico magnet meters are a feature of this unit. The Distributor Tester is available for operation from house circuit or from a 6 volt battery and has a large 12 in. degree scale to permit accurate reading of automatic and vacuum advance curves. The Oil Pressure Tester is used to test oil pressure on cars and trucks and features a large dial, graduated in pounds zero to 100 pounds.

52

Van Norman Company are featuring three new head grinders. One, the No. 565, grinds largest heads, block tops, and other flat surfaces. The second grinder, No. 560, is for truck and tractor work, and the third, No. 555, is for pleasure car and light truck work. According to the manufacturer these grinders are capable of grinding heads 75 per cent faster than is now possible. The large unit is fully automatic and grinds wet or dry with a 16 in. wheel powered by a 5 hp. motor. The two smaller units require no set-up tools and are also designed to speed up head grinding operations.

53

Hastings Manufacturing Company is offering a new mechanic's handbook on piston ring replacement. The 40-page, illustrated book offers not only ring installation information but includes information on other engine repairs. A card enabling mechanics to send for this Handbook is being packed with each set of rings.

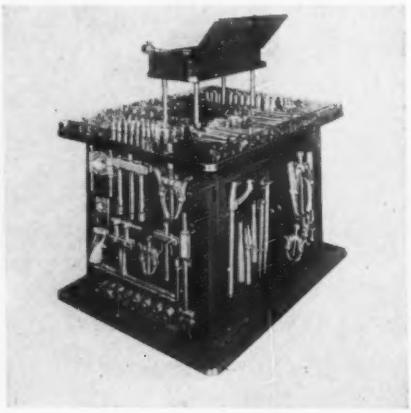
54

Merrill Engineering Laboratories have announced an improved Electronic Wheel Balancer that utilizes a basic eight tube electronic circuit designed to measure the amplitude of unbalanced vibrations and to control the flashing of a stroboscopic tube. In operation special vibration pickup transforms into an alternating current the vibrations set up by the unbalance. This current through an electronic unit controls the flashing of a stroboscope, which locates the unbalance. The entire wheel assembly (tire, tube, wheel, brake drum, etc.) is balanced electronically while revolving on its own spindle.

55

Evans Products Company has augmented its line with two new heaters. The Model MD-10 Super DeLuxe heater-defroster is designed primarily

50



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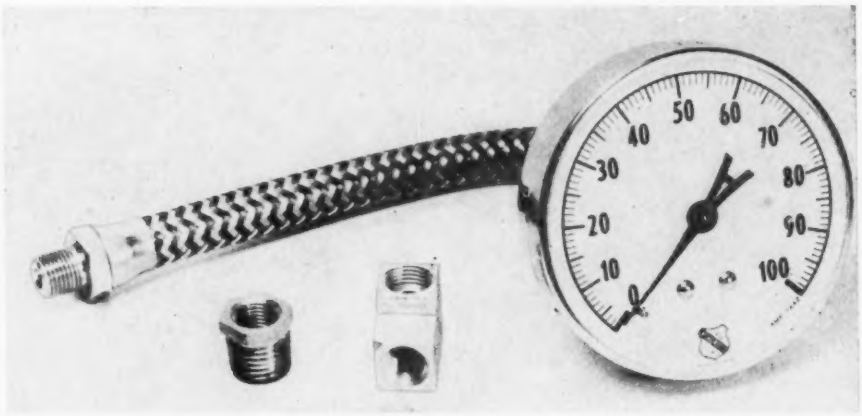

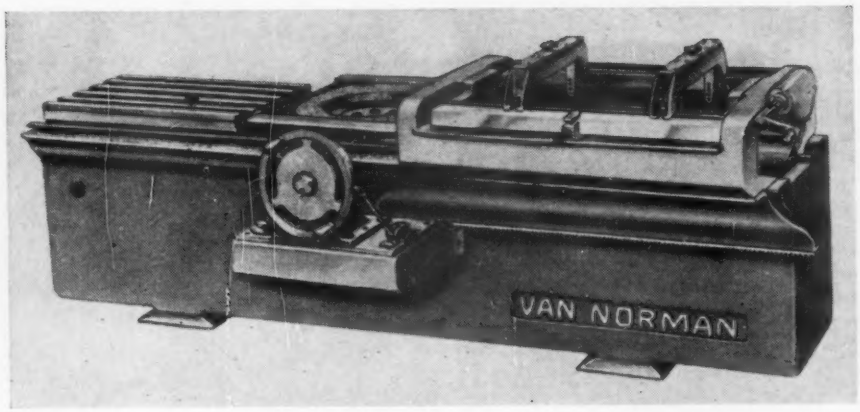

52

53

for station wagons and convertibles but is equally adaptable to passenger cars and trucks. It has a heat output of 20,300 BTU's per hour. Another heater-defroster, this one especially designed for trucks, is the AD-10 with a heat output of 11,700 BTU's per hour.

56

R. E. Dietz Company are featuring their Model 64 Hinge Mounting Extension Mirror and the 410 Series Foglight. The extension mirror mounts, with the universal bracket, on the vehicle body, or with the bracket removed, it may be mounted directly on the door hinge. The Foglight is but 3 inches deep which allows mounting between grille and bumper on latest model cars.

57

National Air Sander, Inc., are introducing a new two-pad reciprocating type sander. This light-weight sander weighs 5½ lbs. and its two pads operate in a straight line reciprocating action with a stroke of 1½ inches. According to the manufacturer vibration is eliminated by the opposed action of the pads to cut down operator fatigue. The machine is provided with an automatic feed for water or cutting agent.

58

United States Asbestos Division of Raybestos-Manhattan, Inc. is marketing Grey-Rock Balanced Braksets in 55 combinations. To cover the entire passenger car market for brake reline jobs, Grey-Rock is offering these Balanced Braksets in engineered combinations of 10 different materials.

59

Preshon, Inc., is featuring an automatic cleaning and degreasing machine which supplies both high pressure steam and hot water. Temperature and pressure are maintained automatically in this unit and clear water for rinsing, either hot or cold, is available immediately. It is fully portable. Using any 110 volt circuit.

60

Hobart Brothers have introduced a new line of industrial type AC transformer welders which features an exceptionally large illuminated current indicating scale. This scale is uniformly calibrated so that the extra large figures are evenly spaced from minimum to maximum welding heat settings. These welders are all of the moving coil type (both primary and secondary coils move when adjustment is made) with no adjustable magnetic paths. The effect of both coils moving, according to the manufacturer, is to cut the time required to make a given change in welding heat by one-third. All connections are enclosed in the case. Hobart Brothers have also introduced a new welder for use with modern "Heliarc" Equipment as supplied by Linde Air Products Company, using helium or argon for Inert-Gas-Shielded Welding.

(*Continued on page* 126)

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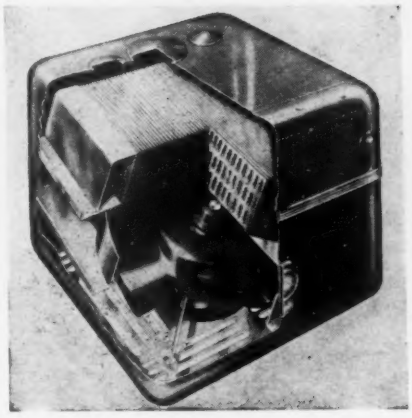

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WHERE Can I Get It?...
HOW Much Will It Cost?...

You'll want more information on some of these products. Bill Toboldt, editor of MOTOR AGE, will see to it that you get the whole story, absolutely without charge, if you will jot down the code numbers of the products that interest you on the coupon below (don't forget your name and address) and send it to him. Use this same coupon if there is any other product or manufacturer about which you want information.

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MOTOR AGE
Chestnut & 56th Sts., Philadelphia 39, Pa.

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.....

Your Name.....**Your Title**.....

Your Company.....

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The Motor Age

NOT only was the year just past the most profitable in the history of the independent maintenance shop and car dealer, but the current year, 1948, should be equally profitable. During 1947 more parts were installed than ever before in the history of the industry. And although more cars and trucks were sold in 1929 than last year, the dollar profits from the sale of new vehicles greatly exceeded any previous year.

Looking forward through 1948 there is every indication that it will be equally, if not more, profitable than the former 12 months. Maintenance should continue at its current high levels, for 94 per cent of the cars on the road are five or more years old and there should be no diminution in the demand for new cars. There is no indication of any material increase in car production.

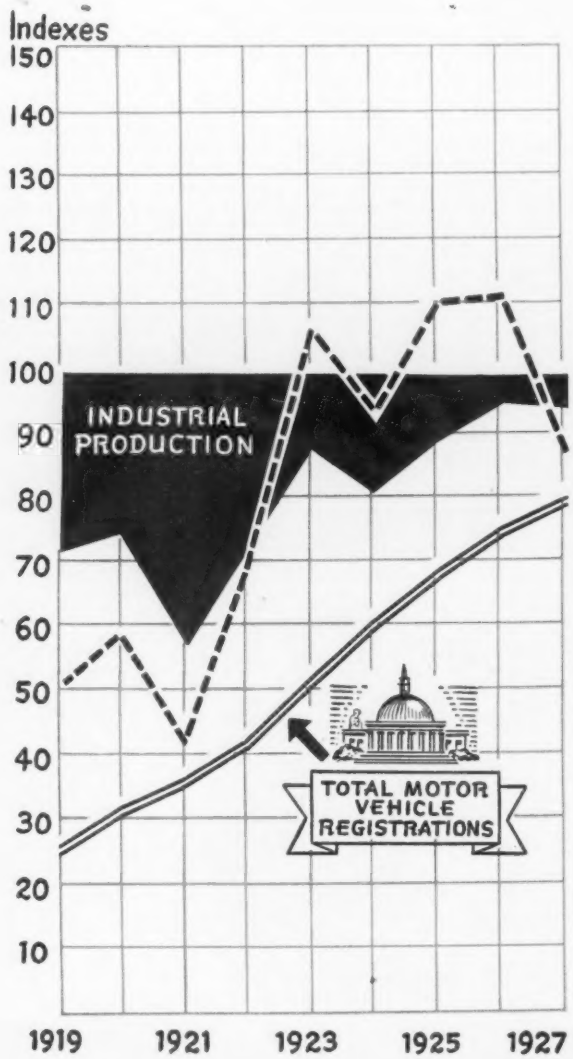
The most accurate gage of maintenance volume is based on Federal Excise Tax receipts on replacement parts and accessories.

As the accompanying chart demonstrates, this has increased steadily since 1943 and for 1947 it reached the unprecedented volume of $2.57 billion wholesale or approximately 5 billion retail. This is a gain nearly 25 per cent over the previous year. Assuming that an equal amount was spent by the car owner for the installation of these parts and accessories, it indicated that the total maintenance market was 10 billion dol-

Total U. S. Motor Vehicle Registrations by Years

Showing Percentage Increases and Decreases

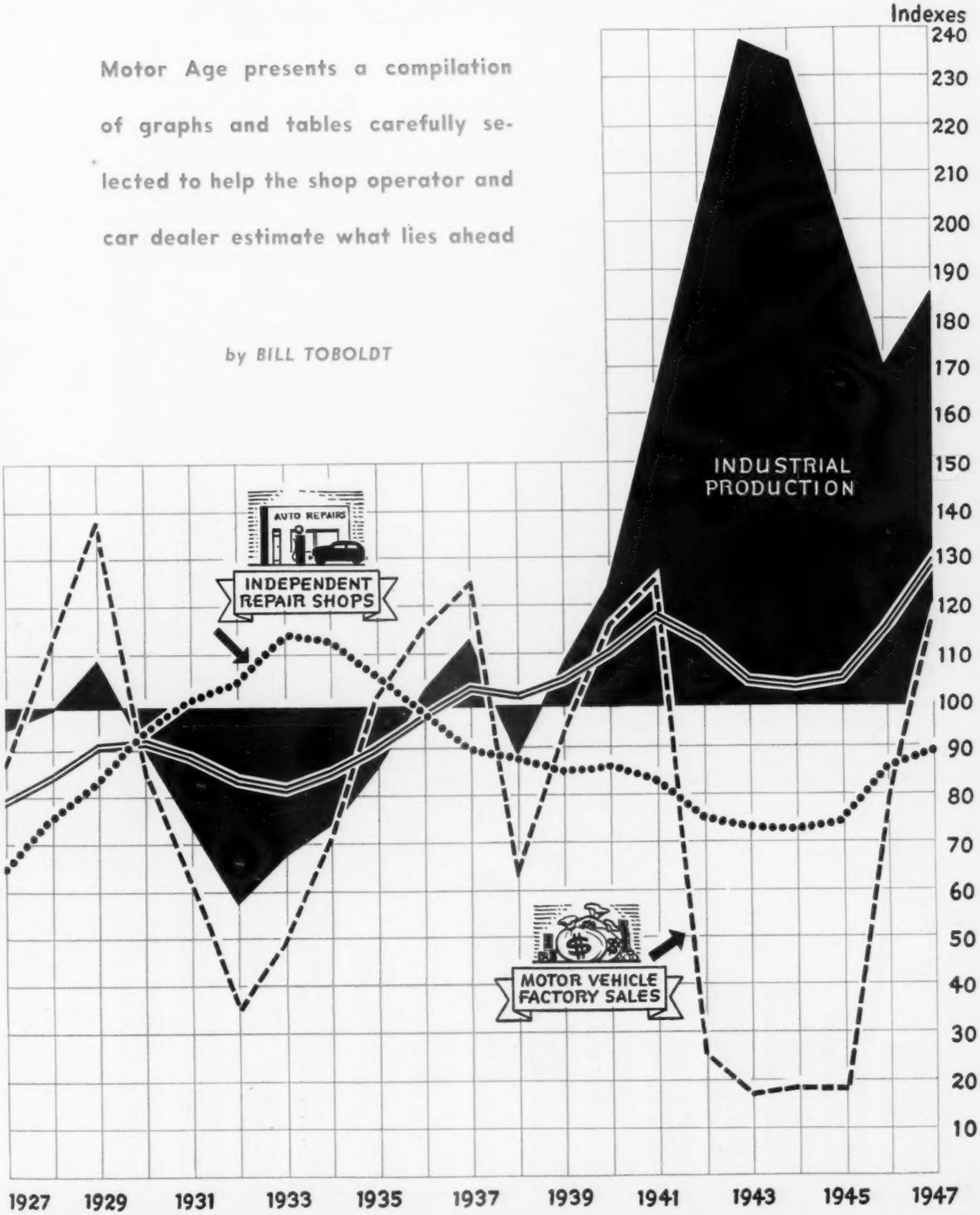
Year	Passenger Cars	Trucks and Buses	Total Motor Vehicles	Per Cent Increase
1909	305,950	6,050	312,000	58
1910	458,500	10,000	468,500	50
1911	619,500	20,000	639,500	36
1912	902,600	41,400	944,000	48
1913	1,194,161	63,800	1,258,062	33
1914	1,625,739	85,600	1,711,339	36
1915	2,309,666	136,000	2,445,666	43
1916	2,297,996	215,000	3,512,996	44
1917	4,657,340	326,000	4,983,340	42
1918	5,621,617	525,000	6,146,617	23
1919	6,771,074	794,372	7,565,446	23
1920	8,225,859	1,006,082	9,231,941	22
1921	9,346,195	1,118,520	10,464,715	13
1922	10,864,128	1,375,725	12,239,853	17
1923	13,479,608	1,612,569	15,092,177	23
1924	15,460,649	2,134,724	17,595,373	17
1925	17,496,420	2,440,854	19,937,274	13
1926	19,237,171	2,764,222	22,001,393	10
1927	20,219,224	2,914,019	23,133,243	5
1928	21,379,125	3,113,999	24,493,124	6
1929	23,121,589	3,379,854	26,501,443	8
1930	23,183,241	3,473,831	26,657,072	0.2
1931	22,567,381	3,426,515	25,993,896	−2.5
1932	21,139,092	3,202,730	24,341,822	−6.4
1933	20,557,493	3,292,439	23,849,932	−2.0
1934	21,535,199	3,346,268	24,881,467	4.3
1935	22,630,715	3,595,042	26,225,757	5.2
1936	24,161,820	3,929,889	28,091,709	7.2
1937	25,476,786	4,172,484	29,649,270	5.6
1938	25,264,589	4,153,389	29,417,978	−0.8
1939	26,147,798	4,496,770	30,644,568	4.2
1940	27,240,475	4,683,376	31,923,851	4.2
1941	29,240,417	4,911,990	34,152,407	7.0
1942	27,683,529	4,741,298	32,424,827	−5.1
1943	25,841,215	4,657,882	30,499,097	−6.0
1944	25,298,639	4,611,966	29,910,605	−2.0
1945	25,398,824	5,025,233	30,424,057	1.7
1946	27,834,543	5,858,813	33,693,356	10.2
1947	30,650,265	6,710,147	37,360,412	10.9



Business Guide for 1948

Motor Age presents a compilation of graphs and tables carefully selected to help the shop operator and car dealer estimate what lies ahead

by *BILL TOBOLDT*



lars. Parts sales follow registrations and California and New York top the list.

An interesting point in considering the maintenance market is that the share of the independent repair shop is approximately 66 per cent, while the car dealer has the balance, or 34 per cent. The national average for the Chevrolet dealers is 32 per cent.

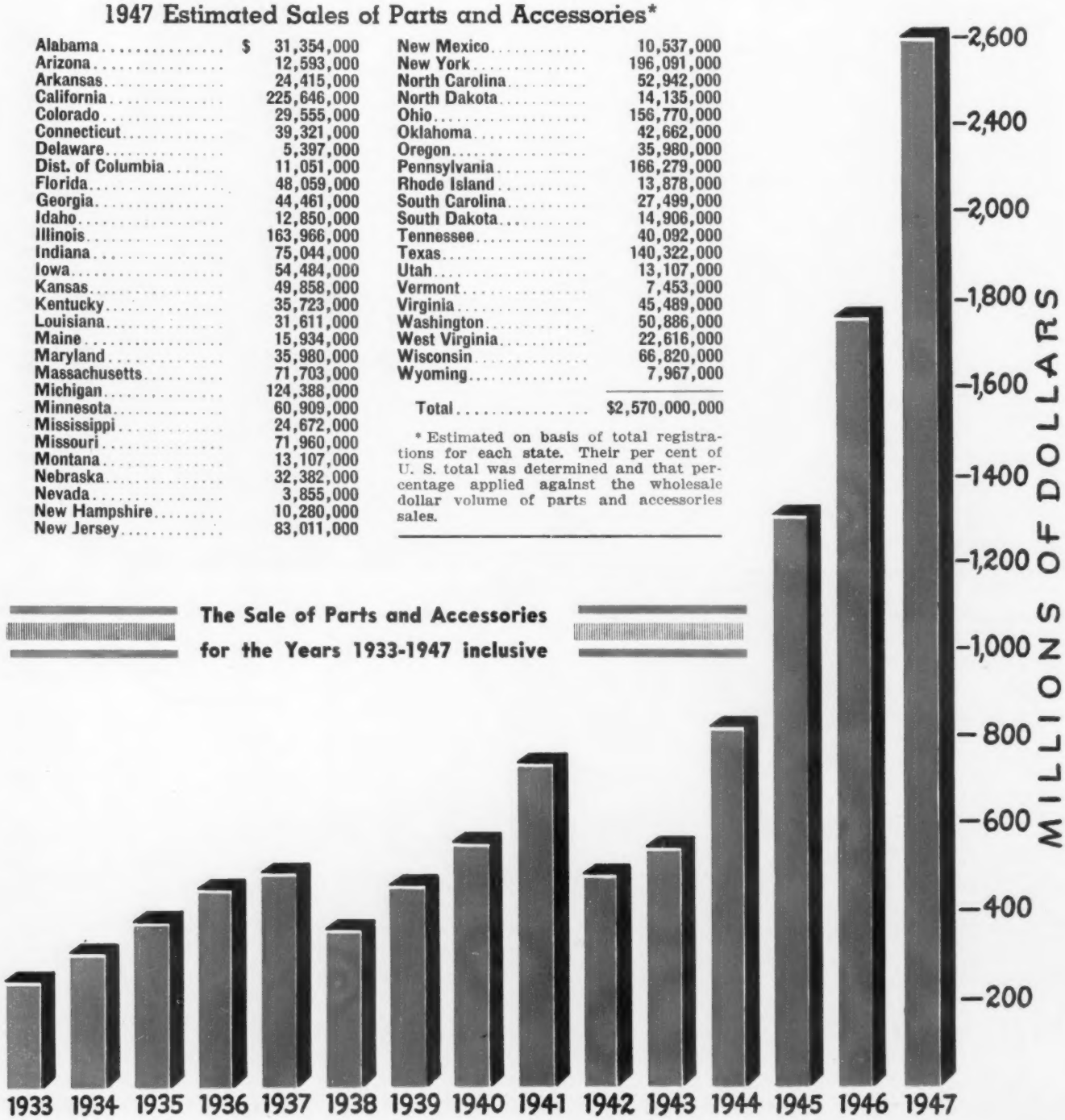
An increasing number of shops are striving for a share of the automotive market and this should be remembered when making advertising plans for the coming year and estimating total service sales. The number of both car dealers and independent repair shops is increasing rapidly, though they have not as yet reached the totals of 1930 when there were 54,354 car and truck dealers and 117,493 independent repair shops. On that basis there were only 155 cars per

1947 Estimated Sales of Parts and Accessories*

Alabama	$ 31,354,000
Arizona	12,593,000
Arkansas	24,415,000
California	225,646,000
Colorado	29,555,000
Connecticut	39,321,000
Delaware	5,397,000
Dist. of Columbia	11,051,000
Florida	48,059,000
Georgia	44,461,000
Idaho	12,850,000
Illinois	163,966,000
Indiana	75,044,000
Iowa	54,484,000
Kansas	49,858,000
Kentucky	35,723,000
Louisiana	31,611,000
Maine	15,934,000
Maryland	35,980,000
Massachusetts	71,703,000
Michigan	124,388,000
Minnesota	60,909,000
Mississippi	24,672,000
Missouri	71,960,000
Montana	13,107,000
Nebraska	32,382,000
Nevada	3,855,000
New Hampshire	10,280,000
New Jersey	83,011,000
New Mexico	10,537,000
New York	196,091,000
North Carolina	52,942,000
North Dakota	14,135,000
Ohio	156,770,000
Oklahoma	42,662,000
Oregon	35,980,000
Pennsylvania	166,279,000
Rhode Island	13,878,000
South Carolina	27,499,000
South Dakota	14,906,000
Tennessee	40,092,000
Texas	140,322,000
Utah	13,107,000
Vermont	7,453,000
Virginia	45,489,000
Washington	50,886,000
West Virginia	22,616,000
Wisconsin	66,820,000
Wyoming	7,967,000
Total	$2,570,000,000

* Estimated on basis of total registrations for each state. Their per cent of U. S. total was determined and that percentage applied against the wholesale dollar volume of parts and accessories sales.

The Sale of Parts and Accessories for the Years 1933-1947 inclusive



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shop, while today with increased registrations and fewer shops there are 367 cars per shop. Shop operators should check this national average and also the state average with their own data to see how they stand. The states of Alabama, District of Columbia, Illinois and Wyoming have had a much larger than normal increase in car registrations, while Indiana, Maine and Rhode Island have only a few cars more.

When planning inventories, comparing profits and estimating future business it is important to note that while national registrations are at an all-time high, the rate of increase in some may be below the national average. In this connection the change in the picture is unexpected as there was nothing in the 1946 figures to indicate that such a change would occur. It is undoubtedly the result of population shifts.

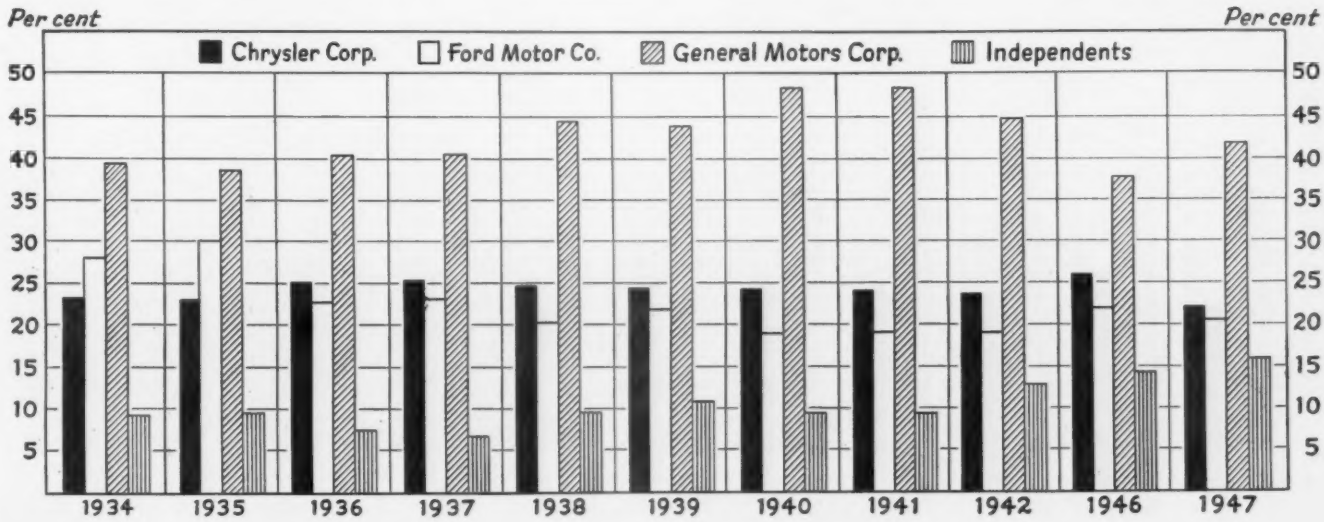
Maintenance establishments in small towns and rural areas will find the data on agricultural tractors, particularly interesting. There are now 2,421,747 tractors tilling the fields of the Nation. This represents an increase of 54 per cent over 1940 and, of course, spells more maintenance for the rural shop. Of equal interest is the number of cars and trucks in rural areas. The number of farm trucks has increased 42 per cent over 1940. 31 per cent of all trucks and 16 per cent of all cars are found on farms. Actually this is only a part of the rural picture as it does not include the vehicles in towns up to 15,000 population. Actually only a small portion of the cars are found in the larger cities, for checking into vehicle registration in cities of 100,000 population and larger, indicates that there are only 10 million vehicles in such cities, while the balance, or 27 million vehicles, are in the smaller cities, towns and rural sections.

Motor Vehicles on Farms*

State	Passenger Cars	Trucks	Tractors
Alabama	58,449	23,949	17,060
Arizona	12,356	6,859	6,372
Arkansas	53,925	33,134	26,537
California	160,252	85,696	32,766
Colorado	44,529	28,794	79,839
Connecticut	25,188	15,651	9,740
Delaware	9,537	3,800	4,604
Dist. of Columbia	22	35	21
Florida	31,721	21,639	12,812
Georgia	90,100	34,688	24,648
Idaho	35,802	19,096	20,299
Illinois	200,914	56,629	174,270
Indiana	165,796	38,411	105,263
Iowa	224,216	37,386	181,049
Kansas	133,593	60,908	116,651
Kentucky	102,997	27,194	24,409
Louisiana	40,651	20,974	17,630
Maine	30,095	17,849	14,794
Maryland	41,485	19,197	18,789
Massachusetts	32,901	18,751	14,026
Michigan	172,655	41,303	110,120
Minnesota	191,691	47,413	152,555
Mississippi	56,906	28,267	21,077
Missouri	165,243	47,225	76,110
Montana	31,569	29,388	31,725
Nebraska	118,572	33,761	96,203
Nevada	3,044	2,603	1,827
New Hampshire	14,987	9,191	6,094
New Jersey	27,875	23,220	19,809
New Mexico	15,351	11,902	10,735
New York	144,948	69,141	93,292
North Carolina	152,109	32,924	31,189
North Dakota	69,235	36,674	73,984
Ohio	221,587	42,808	130,486
Oklahoma	100,584	44,381	70,395
Oregon	59,362	28,118	28,646
Pennsylvania	165,166	56,271	92,638
Rhode Island	3,965	3,142	1,962
South Carolina	77,576	15,348	12,447
South Dakota	68,717	22,230	62,772
Tennessee	91,392	26,326	24,052
Texas	259,599	89,286	162,381
Utah	20,303	10,969	6,876
Vermont	19,663	9,567	7,327
Virginia	94,413	31,956	23,418
Washington	74,205	40,034	32,050
West Virginia	40,477	16,285	6,863
Wisconsin	181,107	61,010	123,280
Wyoming	11,445	8,917	9,855
Total	4,148,275	1,490,300	2,421,747

* From U. S. Census of Agriculture for 1945.

New car registrations by manufacturing groups, shown in per cent of total new registrations



MOTOR AGE BUSINESS GUIDE ★ ★

Estimating what the future holds for car dealers and independent repair shops is always difficult. Obviously it depends on the prosperity of the Nation and as long as it remains at its present high level, the independent maintenance shops and the car dealers will enjoy a high degree of prosperity.

Certainly there is no indication at present of any reduction in the desire of the public for a new car. Recent model "used" cars are still selling at 20 to 30 per cent above par, and although there has been some reduction in the length of time between placing an order for a new car and its delivery, dealers still have long lists of unfilled orders.

While car production is undoubtedly catching up with demand, there should not be a great change in the number of owners desiring new vehicles for an indefi-

1947 Motor Vehicle Registrations

State	Passenger Cars and Taxi Cabs		Trucks		Buses		Total Motor Vehicles		Per Cent Increase
	1947	1946	1947	1946	1947	1946	1947	1946	
Alabama	340,000	296,604	114,000	86,441	1,900	1,823	455,900	384,868	18.5
Arizona	140,230	123,844	41,000	35,044	700	841(1)	181,930	159,729	13.9
Arkansas	240,500	222,579	113,000	94,450	2,180	1,014	355,680	318,043	11.8
California	2,804,000	2,505,002	470,500	406,729	6,900	6,453	3,281,400	2,918,184	12.4
Colorado	328,000	301,622	103,000(1)	90,543(1)	(2)	(2)	431,000	392,165	9.9
Connecticut	490,000	452,886	80,000	75,266	2,500	2,304	572,500	530,456	7.9
Delaware	63,233	56,690	16,616	14,296	(2)	(2)	79,849	70,986	12.5
Dist. of Columbia	143,000	111,156	15,218	14,495	2,300	2,114	160,518	127,765	25.6
Florida	560,000	483,585	136,000	120,525	4,000	3,699	700,000	607,809	15.2
Georgia	496,422	450,148	145,519	126,403	3,693	4,771	645,634	581,322	11.1
Idaho	139,650	123,995	48,306	40,000	(2)	(2)	187,956	163,995	14.6
Illinois	2,070,000	1,614,086	312,500	253,385	(2)	(2)	2,382,500	1,867,471	27.6
Indiana	910,000	897,465	171,000	163,859	8,650	7,818	1,089,650	1,069,142	1.9
Iowa	665,000	621,971	128,500	115,984	(2)	(2)	793,500	737,955	7.5
Kansas	550,000	504,831	173,000	147,296	(2)	(2)	723,000	652,127	10.9
Kentucky	408,000	386,920	110,000	101,541	.....	.....	518,000	488,461	6.0
Louisiana	347,500	333,214	110,000	98,117	3,500	3,433	461,000	434,764	6.0
Maine	174,500	171,919	58,500	56,769	475	444	233,475	229,132	1.9
Maryland	434,621	428,201	86,000	81,649	1,900	1,810	522,521	511,660	2.1
Massachusetts	893,000	835,428	144,500	131,071	5,840	5,782	1,043,340	972,281	10.7
Michigan	1,576,832	1,404,082	233,133	194,546	(2)	(2)	1,809,965	1,598,628	11.1
Minnesota	735,000	673,246	150,000	130,946	484	402	885,484	804,594	10.1
Mississippi	240,000	218,723	112,000	95,536	4,850	4,668	356,850	318,927	11.9
Missouri	834,900	776,771	212,000	188,394	.....	.....	1,046,900	965,165	10.7
Montana	130,000	120,102	62,300	54,947	(2)	(2)	192,300	175,049	9.8
Nebraska	380,600	351,048	91,000	87,121	750	638	472,350	438,807	7.6
Nevada	43,913	38,717	12,595	10,778	(2)	(2)	56,508	49,495	14.2
New Hampshire	115,000	108,351	33,200	28,872	(2)	(2)	148,200	137,223	8.0
New Jersey	1,019,376	943,095	181,465	167,506	6,935	10,429(1)	1,207,776	1,121,030	7.7
New Mexico	110,000	95,864	40,000	35,179	1,990	1,900	151,990	132,943	14.3
New York	2,435,000	2,233,887	405,700	370,709	11,700	10,510	2,852,400	2,615,106	9.1
North Carolina	618,454	553,691	147,897	123,748	2,924	2,883	769,275	680,322	13.1
North Dakota	148,387	138,953	58,644	53,868	300	268	207,331	193,089	7.4
Ohio	2,000,000	1,850,097	270,000	242,603	3,750	3,344	2,273,750	2,096,044	8.5
Oklahoma	470,000	427,036	144,000	128,124	5,000	5,643	619,000	560,803	10.4
Oregon	406,004	360,168	116,429	99,025	1,713	1,466	524,146	460,659	13.8
Pennsylvania	2,022,803	1,869,880	381,254	342,172	12,620(1)	10,517(1)	2,416,677	2,222,569	8.7
Rhode Island	173,807	167,488	27,300	26,959	675	688	201,782	195,135	3.4
South Carolina	320,255	299,211	78,417	64,158	2,737	2,760	401,409	366,129	9.6
South Dakota	165,428	150,471	50,115	42,163	273	233	215,816	192,867	11.9
Tennessee	466,400	415,953	116,000	99,517	(3)	(3)	582,400	515,470	13.0
Texas	1,575,000	1,439,361	460,000	379,158	2,500	2,017	2,037,500	1,820,536	11.9
Utah	152,250	139,402	36,000(1)	31,267	600	339	188,850	171,008	10.4
Vermont	93,500	88,084	15,000	13,570	200	176	108,700	101,830	6.7
Virginia	524,800	479,218	134,300	116,084	2,600	2,477	661,700	597,779	10.7
Washington	582,400	525,222	150,000	117,173	5,700	2,291	738,100	644,686	14.5
West Virginia	250,000	230,764	76,500	66,612	1,400	1,217	327,900	298,593	9.8
Wisconsin	787,500	744,911	181,000	160,940	2,500	1,998	971,000	907,849	7.0
Wyoming	75,000	68,601	40,000	24,105	.....	.....	115,000	92,706	24.0
Total	30,650,265	27,834,543	6,593,408	5,749,643	116,739	109,170	37,360,412	33,693,356	+10.88

Note:—These registrations are for the entire registration year, rather than just the calendar year as it is believed that a more accurate count of vehicles registered will result from that basis. [1] Includes taxicabs. [2] Included with trucks. [3] Included with passenger cars.

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nite period. The reason for this is that only 6 per cent of the cars on the road today are less than five years old. In July 1941, 51 per cent of the cars were less than five years of age. If that percentage is considered as being normal, it will be several years before that condition is reached.

The primary difficulty in bringing about any change in this picture is that car production is hog-tied by a lack of steel and steel scrap. Until steel production is increased or the demand for steel from other industries is reduced, car production will stay at approximately its present levels. It must be remembered, in this connection, that while production will remain in the neighborhood of 5 million cars, total registrations are increasing at nearly that same amount. Before the War the number of vehicles junked annually was approximately a million units. During the War this decreased to approximately 200,000 and currently the rate is about 500,000 annually.

It is important to remember this low junking rate and also that 94 per cent of the cars are 5 years or more of age as they have direct influence on inventory. Stocking practice as followed before the war when average car life was 7 years cannot be followed today.

Automotive Wholesalers, Dealers and Repair Shops, by States

With Number of Motor Vehicles per Outlet

		WHOLESALERS		DEALERS		INDEPENDENT REPAIR SHOPS		RETAIL OUTLETS	
STATE	Total Motor Vehicle Registration	Number of Wholesalers	Motor Vehicles per Wholesaler	Car and Truck Dealers	Motor Vehicles per Car and Truck Dealer	Independent Repair Shops	Motor Vehicles per Repair Shop	All Retail Outlets	Motor Vehicles per Outlet
Alabama	455,900	125	3,647	462	987	363	1,256	894	510
Arizona	181,930	58	3,137	203	896	309	589	544	334
Arkansas	355,680	117	3,040	494	720	554	642	1,069	327
California	3,281,400	669	4,905	2,077	1,580	5,247	625	8,943	367
Colorado	431,000	95	4,537	493	874	595	724	1,286	335
Connecticut	572,500	112	5,112	523	1,095	646	886	1,407	407
Delaware	79,849	20	3,992	68	1,174	115	694	207	386
Dist. of Columbia	160,518	24	6,688	70	2,293	131	1,225	240	669
Florida	700,000	144	4,861	571	1,226	642	1,090	1,317	532
Georgia	645,634	147	4,392	663	974	281	2,298	1,108	583
Idaho	187,956	68	2,764	370	5,080	285	659	820	230
Illinois	2,382,500	447	5,330	2,342	1,017	3,129	761	6,024	396
Indiana	1,089,650	221	4,931	1,165	935	1,215	898	2,655	410
Iowa	793,500	200	3,968	1,255	632	1,124	706	2,623	303
Kansas	723,000	154	4,695	860	841	772	937	1,680	430
Kentucky	518,000	123	4,211	637	813	373	1,389	1,112	466
Louisiana	461,000	93	4,957	418	1,102	412	1,119	883	522
Maine	233,475	51	4,578	371	629	594	393	976	239
Maryland	522,521	87	6,006	429	1,218	410	1,274	892	586
Massachusetts	1,043,340	217	4,808	1,142	914	1,351	772	2,821	370
Michigan	1,809,965	322	5,621	1,818	996	2,905	623	5,329	340
Minnesota	885,484	151	5,864	1,433	618	1,493	593	3,279	270
Mississippi	356,850	97	3,679	482	740	215	1,660	715	499
Missouri	1,046,900	244	4,291	1,095	956	1,169	896	2,552	410
Montana	192,300	54	3,561	397	484	260	740	701	275
Nebraska	472,350	109	4,333	655	721	567	833	1,445	327
Nevada	56,508	14	4,036	102	554	128	441	235	241
New Hampshire	148,200	26	5,700	223	665	271	547	499	297
New Jersey	1,207,776	219	5,515	1,026	1,177	1,929	626	3,277	369
New Mexico	151,990	59	2,576	245	620	221	688	629	242
New York	2,852,400	540	5,282	2,601	1,096	4,995	571	8,467	337
North Carolina	769,275	182	4,227	815	944	728	1,057	1,661	463
North Dakota	207,331	45	4,607	426	487	421	492	909	228
Ohio	2,273,750	437	5,203	2,027	1,122	2,571	884	4,835	470
Oklahoma	619,000	160	3,869	739	838	948	653	1,810	342
Oregon	524,146	120	4,368	515	1,018	1,098	477	1,748	300
Pennsylvania	2,416,677	500	4,833	3,008	803	4,221	573	8,235	293
Rhode Island	201,782	34	5,935	144	1,401	262	770	440	459
South Carolina	401,409	79	5,081	411	977	330	1,216	712	564
South Dakota	215,816	39	5,534	341	633	300	719	686	315
Tennessee	582,400	140	4,160	478	1,218	385	1,513	978	596
Texas	2,037,500	489	4,167	2,203	925	2,650	769	5,545	367
Utah	188,850	61	3,096	203	930	318	594	583	324
Vermont	108,700	21	5,176	183	594	204	533	450	242
Virginia	661,700	111	5,961	703	941	738	897	1,520	435
Washington	738,100	169	4,367	792	932	1,582	467	2,887	256
West Virginia	327,900	81	4,048	492	664	353	929	988	332
Wisconsin	971,000	183	5,306	1,408	690	1,203	807	2,785	349
Wyoming	115,000	30	3,833	199	578	138	833	361	319
Total	37,360,412	7,888	4,736	39,777	939	51,151	730	101,762	295

Presenting The 1948 CHEVROLET

Redesigned engine bearings head mechanical changes and new interior trim is featured

THE new 1948 Chevrolet has interchangeable main bearings in place of the poured type heretofore standard, and a heavier crankshaft. These, in addition to new valve-stem oil seals, are the major mechanical changes over last year's model.

Three series, available in 11 models, make up the new line, the Fleetline, the Fleetmaster and the Stylemaster. Chief alteration in appearance, in all types, is a re-designed front-end grille and a simpler, re-designed hood ornament.

All series use the familiar valve-in-head Chevrolet engine. This has been modified, however, by the use of a more rigid crankshaft, with greater crank-arm thickness for greater durability and increased bearing life. The increased weight, according to Chevrolet, increases engine smoothness. Most important change of all, as mentioned above, is the change-over from the poured type of main bearing to the interchangeable, precision-type, thin-wall babbitt variety.

A new, Chevrolet-developed valve-stem oil seal, made of buna rubber, is used. This seal eliminates the need for valve spring cap covers, thus achieving a weight reduction in reciprocating parts. Caps are smaller and stronger and low speed oiling of the valve stems is improved.

The chassis and suspension units remain unchanged as does the syncro-mesh transmission with vacuum shift. A pressure-type radiator cap is now fitted, raising the boiling point about 10 degrees. Because of this system, the temperature gage on the dash has a top reading of 220 degrees instead of 212 degrees. A large radiator drain-cock has been installed to facilitate draining.

The electrical system remains unaltered except for modifications in the lighting and ignition switches. The lighting switch now incorporates a circuit breaker, making possible intermittent use of the lights for emergency driving, when a short circuit occurs. The unusual ignition switch is so designed that the car ". . . may be driven with the key removed." The key may be removed in any position on the three-position switch—unlocked off, unlocked on and locked off—and the ignition may still be turned on or off with the switch in either of the first two positions. Presumably, this is to permit the owner to take his key with him when leaving the car at parking lots and garages.

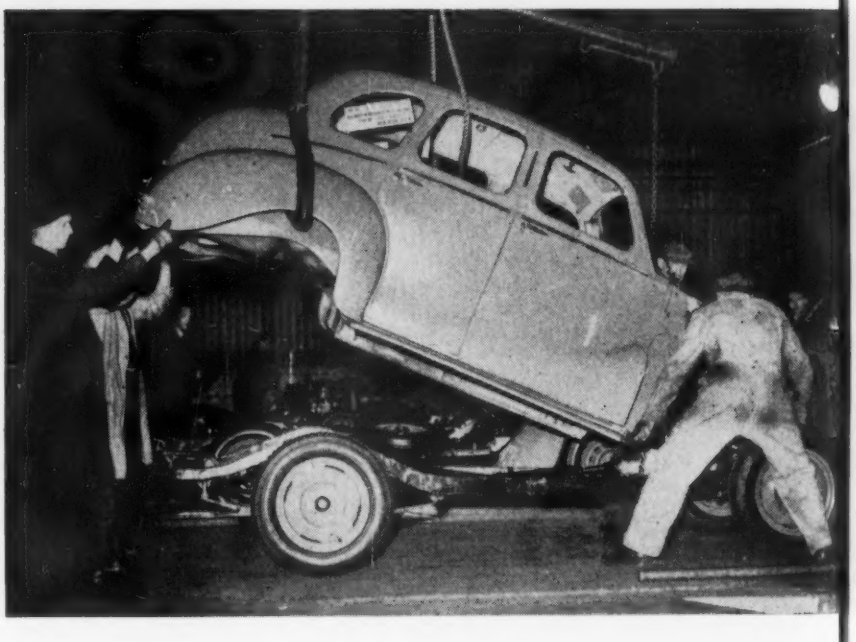
Chief change in the bodywork consists in new interior fabrics which are generally lighter in tone than those used on last year's models. The Fleetline models, for instance, have flat-woven pin stripe material in slate blue and brown, while the Fleetmaster and the Stylemaster have pile, striped material.

Virginia Grey, a native Hollywoodian and daughter of one of the original Keystone Kops, has been given a seven-year contract and stardom. She will soon be seen in the film, "So This Is New York."

MOTOR AGE PICTURE GALLERY

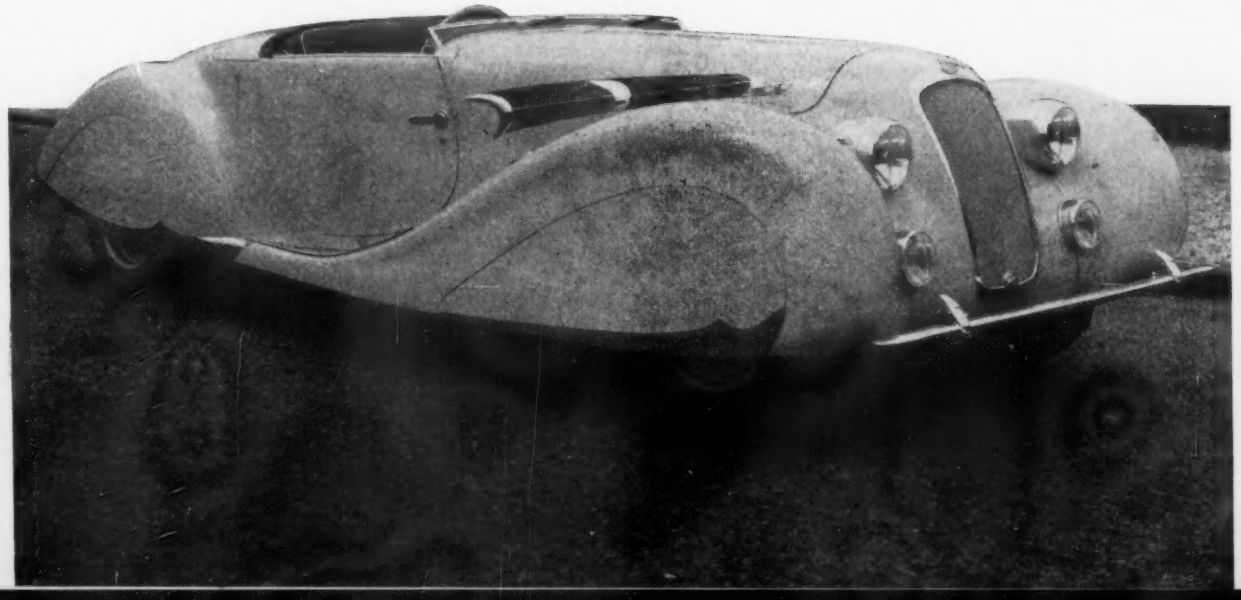
Tire designer John Antonson shows the steel coils, in rectangular shape, that are laced into the tread of the new Goodrich aircraft tire to give it bite on icebound runways.

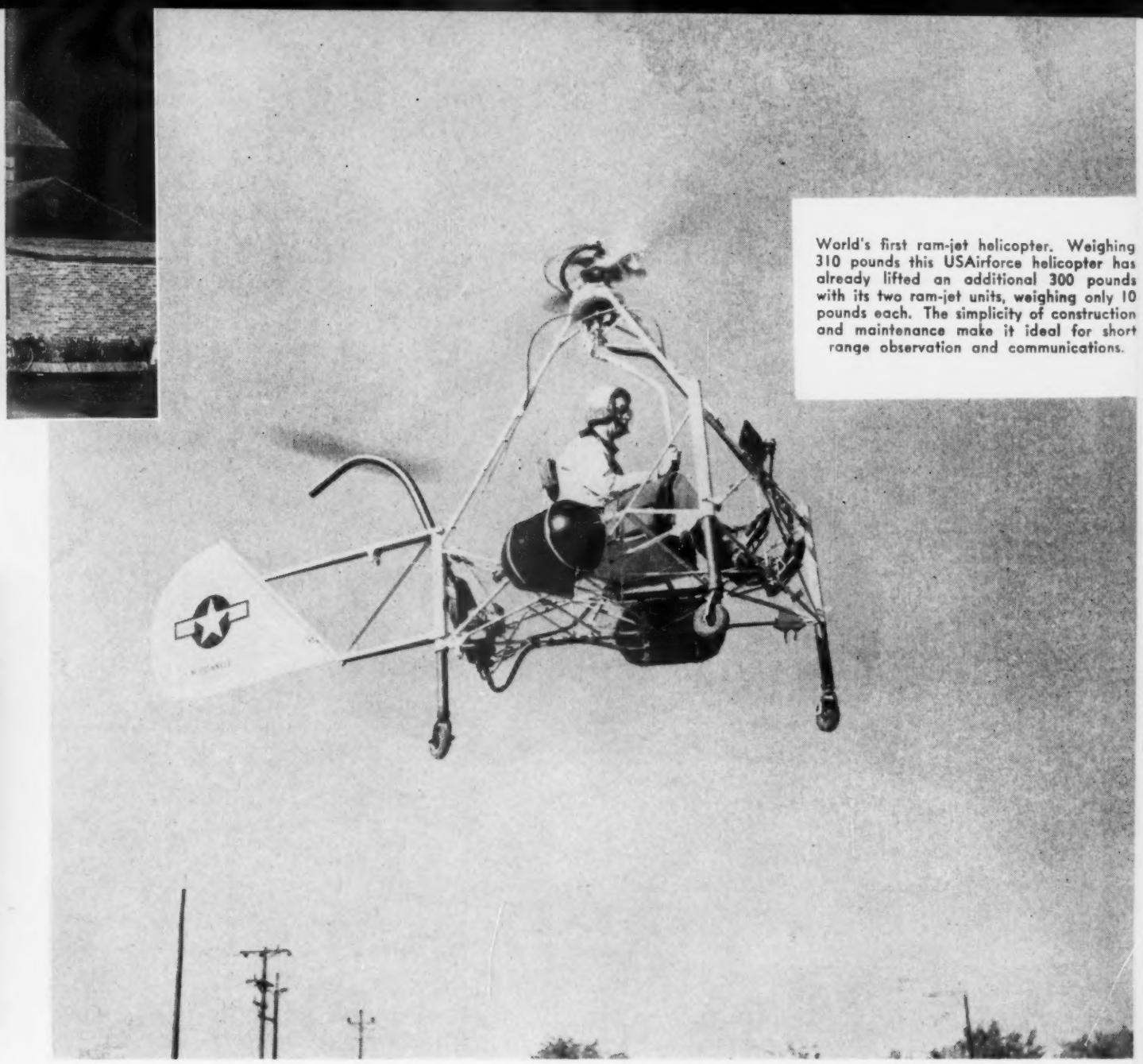
In a Texas Co. reconstruction of a frontier village, all shops will be replicas of the 1856 originals pictured above. They will include an Apothecary Shop, the old Bottle House, a famed bar known as the Palace Saloon, an old theater, blacksmith shop, general store, a florist shop, emporium, job printing shop and a rooming house.



Lowering an A.40 body onto the chassis of an Austin at Birmingham. This model has lefthand drive and is for export only. The Austin works at Birmingham, England, is working full pressure to fulfill a demand from America for some 30,000 Austins, added to order from Canada for between five and seven thousand cars.

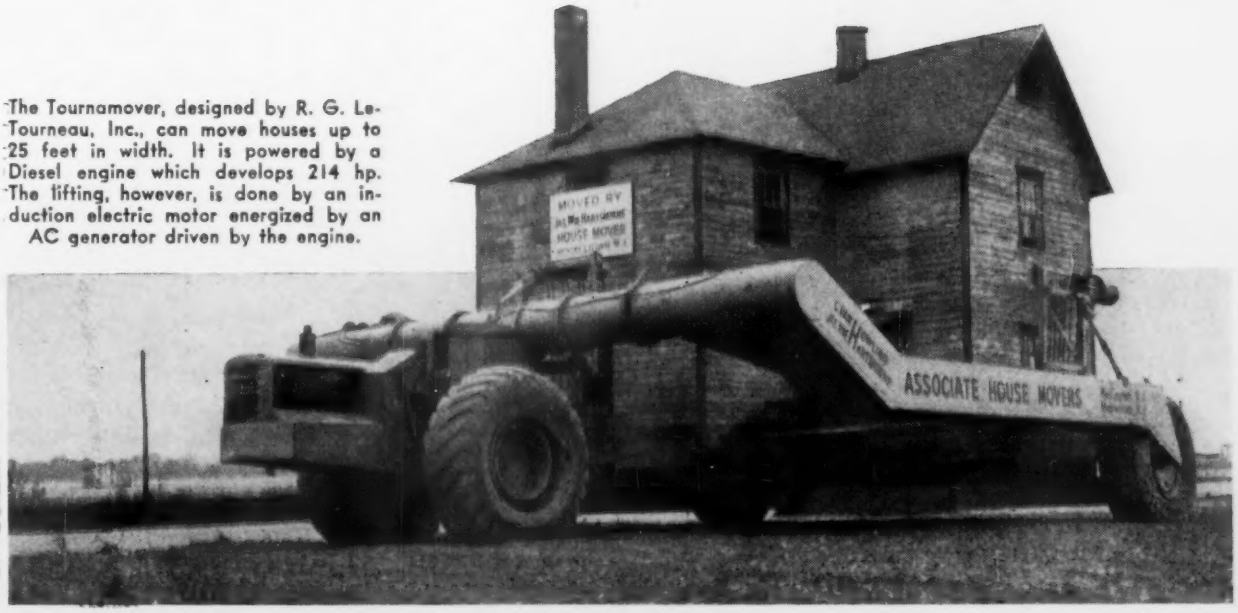
At the recent Paris Automobile Show the French styled Delage D-6 roadster attracted a great deal of popular attention.





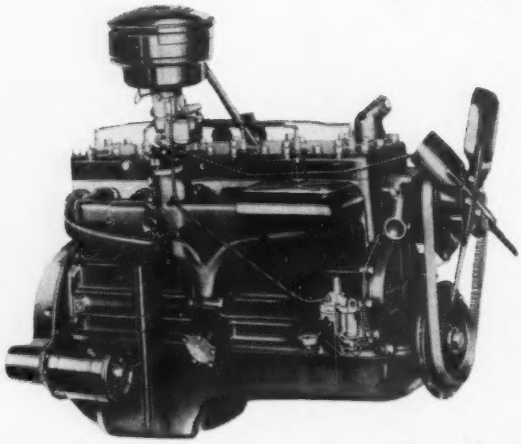
World's first ram-jet helicopter. Weighing 310 pounds this USAirforce helicopter has already lifted an additional 300 pounds with its two ram-jet units, weighing only 10 pounds each. The simplicity of construction and maintenance make it ideal for short range observation and communications.

The Tournamover, designed by R. G. LeTourneau, Inc., can move houses up to 25 feet in width. It is powered by a Diesel engine which develops 214 hp. The lifting, however, is done by an induction electric motor energized by an AC generator driven by the engine.



The heavy duty model above is typical of Ford styling for the new truck line emphasizing massive lines and an inset grille and headlight design unit.

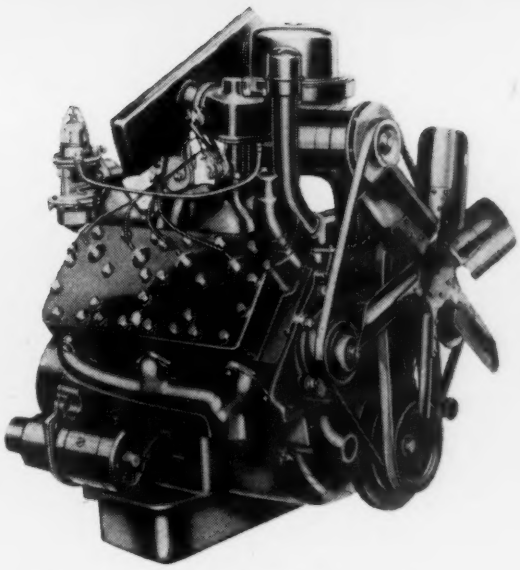
FORD Announces



The 95 hp 226 cu. in. six cylinder engine with a 3.3 in. bore and 4.4 in. stroke.

THE new Ford trucks announced early in January were received with more than ordinary interest as many observers believed that the new engines would also be used in the passenger cars some time later in the year. The new power plants include a completely new 337 cu. in. V-8 developing 145 h.p.; a 239 cu. in., 100 h.p. V-8 and a 95 h.p. 226 cu. in. Six. The last two having many of the features found in the current six and Mercury passenger car engines. The new truck line is divided into three categories: "Light Duty" with ratings up to one ton; the "Heavy Duty" with nominal ratings of 1½ to 2 ton and the "Extra Heavy Duty" with maximum GVW ratings of 19,000 to 21,500 lbs., which is the largest ever made by Ford.

There are many new features in these engines which are of particular interest from a maintenance point of view. First of all the split type valve guide with mushroom end valve stems have been abandoned. On all models, split cone type valve spring keepers are used and the six has adjustable mushroom tappets with self-locking nuts. On the smaller Eight the valve tappets are non-adjustable but valves are easily removed being of the straight stem type. Hydraulic lifters and one-piece valve guides feature the new



The 337 cu. in. V-8 develops 145 hp. It has a 3.5 in. bore and a 4.375 in. stroke.

This new 239 cu. in. V-8 with a 3.1875 in. bore and a 3.75 in. stroke develops 100 hp.

Ford's truck line offers three new engines of 95,100 and 145 hp. The light model has Bendix brakes, Hotchkiss drive and adjustable tappets

by JACK K. MONTGOMERY

New Truck Line

337 cu. in. engine used in the Extra Heavy Duty line.

One of the most discussed items is the abandonment of the characteristic Ford ignition distributor. The new unit called "Loadomatic" is a full automatic vacuum controlled unit, without any centrifugal advance. On the Six this is driven on an angle through the block with the new external oil pump at the lower end and the distributor at the upper end. Oil pressure gage is now located on left side of engine. In the case of the 100 h.p. Eight, the distributor is on the front of the engine but driven at an angle across the front of the block. The distributor on the large Eight is vertically mounted at the rear of the engine. High tension wiring in each case is now open instead of being enclosed in conduit. Fan pulleys are marked for setting ignition timing and generator mountings have been redesigned to simplify removal.

Pistons in each case are 4-ring aluminum alloy and on the 145 h.p. unit the top compression ring is chrome plate for longer life. This engine also has steel backed copper lead rod bearings of individual replaceable type for each rod, a departure from former Ford practice. The silchrome exhaust valves are Stellite faced and the valve seats are molybdenum.

Standard Ford practice is followed in the gear-driven camshaft on the big Eight. Three 2.8738 in. diameter main bearings carry the counter weighted crankshaft. The shaft weighs 90 lb. and a viscous type vibration damper is used at the front end. Oil pump is driven from the rear of the camshaft and two relief valves are provided, one in the pump and the other at the front end of the block. Main bearings, rods, camshaft bearings and valve lifters are pressure lubricated. A replaceable element type oil filter is standard equipment. The truck type oil pan is provided with a large removable clean-out sump and has a capacity of 10 qt. Oil filler pipe is conveniently placed at the front of the engine. Water pumps, one for each block, are mounted on the front of the block.

Fuel system on the new large Eight comprises a dual concentric downdraft carburetor with all metering jets and passages located in the center of the float bowl. The manifold also acts as a valve chamber cover in the familiar Ford design.

In addition to the details of the new Six previously mentioned, an important innovation is to be found in the intake manifolding which is now of the four port

(*Continued on page* 112)

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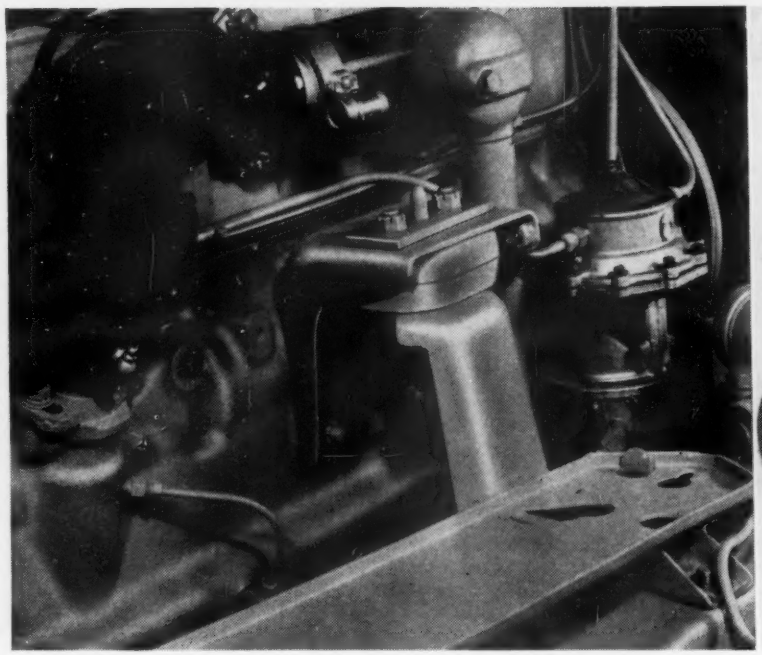
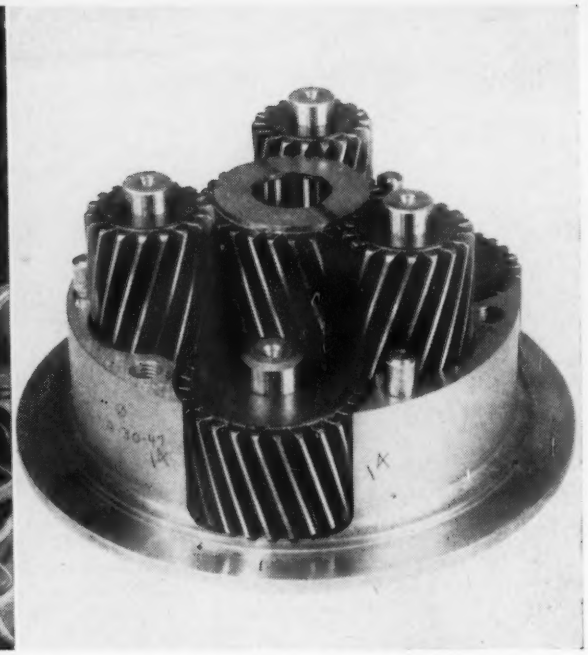


Detail of the new controlled frequency engine mount used on all 1948 models. The right side of the mount is shown.



This planetary pinion cage assembly provides emergency low and reverse on the new Dynaflow transmission, on Series 70 only.

The BUICK Roadmaster Features Dynaflow

Highlights of the Buick line for the coming year. A description of the Dynaflow transmission will appear in next month's MOTOR AGE

THE most noteworthy feature of the Buick Motor Div., announcement of its line for 1948 is the introduction of the Dynaflow transmission, which is offered as optional equipment only on the Series 70 Roadmaster models. This transmission is of torque converter type and is patterned after the Torqmatic transmission used in the Hell-Cat tank destroyers built by Buick during the War.

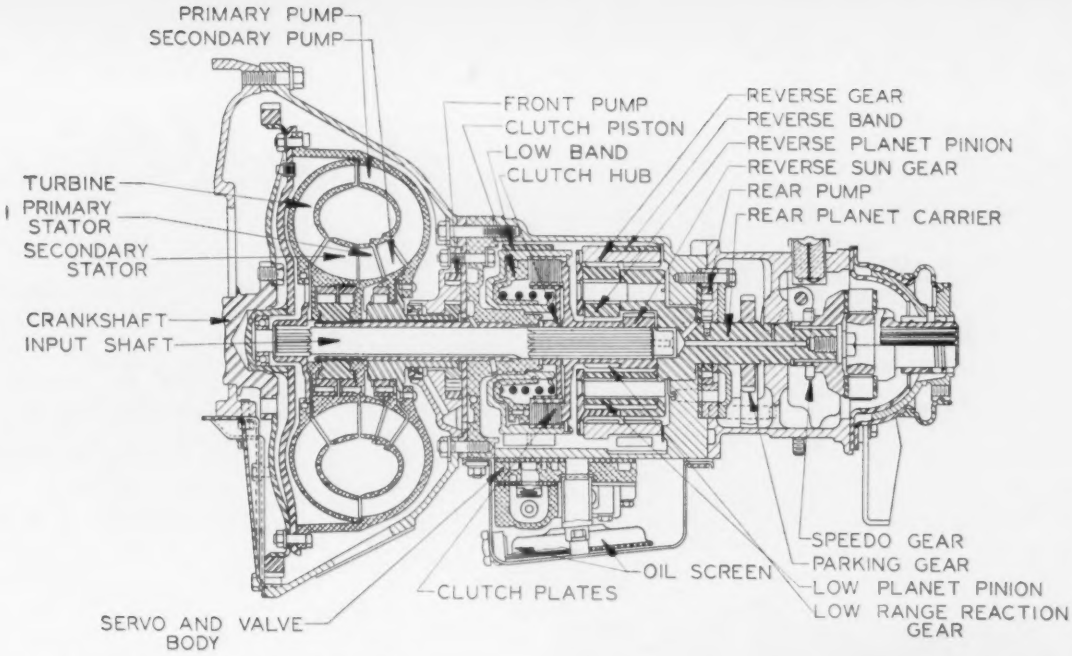
Although basic specifications remain unchanged, Buick offers its familiar models—the Series 40, 50, and 70 with a number of modifications. Among the most important of these are: the new controlled frequency engine mountings; adoption of new tire sizes on Series 50 and 70; and an important change in engine cylinder bore set-up.

The engine set-up on all three lines remains substantially the same as for 1947. Compression ratio on the Series 50 has been stepped up to 6.6 to 1. The Series 70 engine with conventional transmission will continue a compression ratio of 6.6 to 1; but this is increased to 6.9 to 1 on engines used with the Dynaflow transmission. In addition, for Dynaflow installation, the engine is fitted with a new crankshaft and also with an entirely new flywheel.

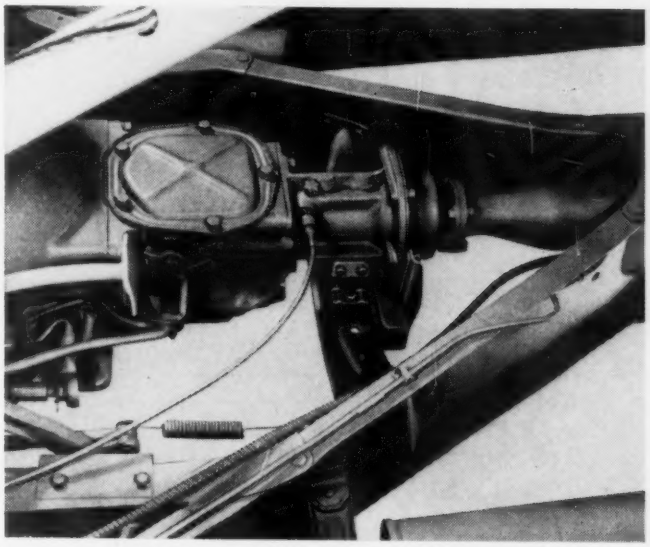
The other major engine change is the adoption of the Thompson Products "U-Flex" oil control ring which is used as the third ring on the four ring piston. In addition, the bottom oil control ring has been modified slightly in form to provide "quick-seating."

The front suspension system on Series 40 and 50 cars is modified by the use of higher springs to provide increased ride clearance. The stabilizer bar on all models is continued unchanged save for the adoption of split bushings which change the design of bushings and brackets.

Rear axle and suspension system on the 40 and 50



A cross sectional drawing of the Dynaflow transmission showing the torque converter, planetary gearing and the direct clutch.



A close-up view of the rear controlled frequency engine mount on the new Buick.

Transmission

remains unchanged and continues the optional 4.1 to 1 rear axle. The 70 axle ratio remains 4.1 and offers as an option the 3.6 to 1 rear axle both on conventional and Dynaflow equipped cars. The standard rear axle offered with Dynaflow transmission has a gear ratio of 3.9 to 1.

The standard transmission set-up remains the same except for modification for the new rear engine mount. On the 40 and 50, the rear bearing retainer is the same length as on the 1947 Series 50 with modification for the rear motor mount. On the Series 70 the Dynaflow transmission is offered as optional equipment. The electrical system remains the same except for certain modifications.

Steering gear set-up remains the same on all models. The same is true of the fuel tank and exhaust system except that on the Series 40 the tailpipe is changed to provide more frame cross-member clearance.

Buick retains the wide rims first introduced on the Series 40 in 1941 and on the 1948 Series 40 retains the same tire sizes used heretofore. On the Series 50 and 70 new tires have been adopted, the 50 being equipped with 7.60-15 and the 70 with 8.20-15. Both sizes are mounted on 6½ inch rims. These new sizes make possible the use of slightly lower pressures.

The new controlled frequency engine mountings deserve special attention. Fundamentally their design is based on the fact that a motor car is a vibrating system that can be treated much the same as any vibrational problem. The engine mounts are so designed that the frequency of the engine on its mountings eliminates or damps other vibrations whether they are induced by the engine or by road irregularities. The location of the mountings and the material used for their construction are the two basic factors responsible for the results thus achieved. The new mounting is a three-point system with two front mounts; and a rear mount, composed of two pieces located at the torque tube ball joint—one to support a portion of the weight of the engine and transmissions; the other to take the thrust drive from the rear wheels.

SALES The MOTOR

MOTOR AGE FOR

LATE BULLETINS . . .

★ Bill in Congress calls for restoration of automotive taxes to prewar levels.

★ W. L. Mallon re-elected N.A.D.A. vice-president to represent Connecticut, New York and New Jersey.

★ Sales by car wreckers to top 100 million, according to National Auto Wreckers Association.

★ Nash parts sales increased from $5,400,000 in 1941 to $33,600,000 in 1946 and are expected to total $3 million in the current year. Increase laid to intensive training and promotion campaigns.

★ Commerce Department reports that 1947 production of goods had a record volume of $230 billion.

★ Ford plans to produce over one million units in 1948.

★ Howard A. Bradley, Jr., Quaker City Motor Parts Co., Philadelphia, has been elected president of the National Automotive Parts Association.

★ Chevrolet was the first single company to produce a million vehicles in a year's time since before the War.

★ G.M. produced 1,731,381 cars and trucks in first 11 months of 1947. Chevrolet was first with 624,102 passenger cars and Buick second with 246,865.

★ Gulf Oil announces increases in retail and wholesale prices of lubricating oil.

★ Survey made by Modern Industry magazine indicates that one-third of potential car buyers have abandoned plans to purchase new cars because of increased prices.

★ 1947 steel output greatest ever recorded in peacetime.

★ Aluminum production in 1947 tops all peace-time records.

★ The Senate has approved the Buck resolution designed to revive Regulation W until March 15, 1949. There is little enthusiasm in the House to restore control over installment buying.

NADA Welcomes Seven Newly Elected Directors

During the past month seven new directors of the National Automobile Dealers Association have been elected. They are: W. H. Sadler of Little Rock, Ark.; Lloyd Morton of Farmington, Maine; P. L. Abernethy of Charlotte, N. C.; E. S. Dowd of Cleveland, Ohio; J. E. Wolfington of Philadelphia, Penna.; George H. Jones of Corpus Christi, Texas; Walter Wilkins of Norfolk.

Important Changes Made In Racing Specifications

A new ruling which will make possible small car participation in open competition with the 220 cubic inch class was adopted by the A.A.A.'s Contest Board at its recent meeting in Los Angeles, the American Automobile Association announced today.

The revised regulations were adopted in order to provide bigger and better fields of racing cars for non-championship races on tracks of one-half mile or more in length, the Contest Board pointed out.

The new regulations require a minimum wheel base of 84 inches for cars having a displacement of 140 cubic inches in L-Head and flat head engines; 105 cubic inches in overhead valve unsupercharged and 52 cubic inches in overhead valve supercharged engines. Cars with lower displacements may run with a minimum wheel base of 66 inches.

The maximum displacement of 220 cubic inches for overhead valve engines in the non-championship class remains unchanged. The maximum displacement for L-head and flat head engines in this class is increased to 27 cubic inches.

This Congress Expected To Cut Automotive Taxes

The chances for reduction of excise taxes burdening the automotive industry are becoming brighter. The present session of Congress already has before it several bills which would substantially reduce automotive levies.

But, perhaps more important is a growing feeling within the Administration that such action is necessary. For example, Treasury Secretary John W. Snyder recently

(*Continued on page* 218)

1947 Factory Sales From U. S. Motor Vehicle Plants*

PASSENGER CARS	
September	307,942
October	315,969
November	305,148
Total—Eleven Months	3,191,239
TRUCKS AND BUSES	
September	112,328
October	120,032
November	89,028
Total—Eleven Months	1,136,456
TOTAL MOTOR VEHICLES	
September	420,270
October	436,001
November	394,176
Total—Eleven Months	4,327,695

Weekly Motor Vehicle Production
U. S. and Canada**

December 6	115,197
December 13	117,705
December 20	120,001
December 27	75,638

* Automobile Manufacturers Association.
** Ward's Automotive Reports.

Sarvis Appointed to Chevrolet Sales Post

Appointment of a new assistant general sales manager for Chevrolet was announced recently by T. H. Keating, general sales manager. Named to aid the Chevrolet sales chief was Ivan X. Sarvis, formerly regional manager of the division's Southwest Region, with headquarters at Dallas, and a veteran of more than 20 years in Chevrolet.

A native of Iowa, Sarvis joined the organization in 1926 as a representative in Los Angeles. He subsequently was appointed assistant zone manager, serving at El Paso and San Antonio. As a zone manager in following years, he returned to El Paso, and then held similar posts at Minneapolis, Fargo, Omaha and Houston.

In 1938, he was elevated to assistant regional manager for the Midwest Region, at Kansas City, and in 1945 was named regional manager at Dallas, the post he leaves for the Central Office appointment in Detroit, Michigan.

Car Makers Switch to Aluminum in Steel Lack

In the face of the continuing sheet steel shortage, all automobile manufacturers are intensifying their efforts to replace sheet steel parts with aluminum. Ford has made considerable progress in this direction and already has a dozen or more substitutes incorporated into the current model. These include the running board, headlamp body, rear bumper stone deflector, front fender brace, radiator air shield deflector, air duct from front radiator to cross member, cowl ventilator cover, floor board front panel, hot water heater case, hot water heater duct assembly, hot water heater deflector and the duct from radiator grille to radiator shield. It is estimated that the savings amount to about 50 lb. of steel per car, which would amount to a sizable total when applied to a year's production. Several other sheet steel parts may be changed.

UAW-CIO Continues Drive To Oust Commie Officers

Following the anti-Communist purge of the UAW-CIO at the annual convention in November, the union has been moving energetically to clean out officials who refuse to sign the anti-Communist affidavit required under the Taft-Hartley law before the union can utilize the services of NLRB. The members of Ford Local 600, largest in the country, have been asked to vote on whether five officers who refused to sign the statements should be removed from office. The referendum was called on recommendation of the local's general council. The action is considered a severe blow to the Communists, who have had a larger measure of success in the Ford local than in any other in the industry. The membership of a smaller local in Detroit recently voted its recording secretary out of office when he refused to sign the affidavit.

New Passenger Car Registrations*

Arranged by Makes in Descending Order According to the Ten Months' 1947 Totals

MAKE	October 1947	September 1947	October 1946	TEN MONTHS Units 1947	TEN MONTHS Units 1946	TEN MONTHS Per Cent of Total 1947	TEN MONTHS Per Cent of Total 1946
Chevrolet	52,596	43,825	41,516	525,842	209,421	20.26	15.99
Ford	50,233	44,664	41,871	432,098	249,291	16.64	19.02
Plymouth	26,354	27,841	24,212	260,832	172,599	10.05	13.18
Buick	24,509	22,280	20,049	201,563	82,341	7.76	6.29
Dodge	19,495	18,702	13,181	173,140	108,144	6.67	8.25
Pontiac	17,342	14,688	16,988	168,816	74,620	6.50	5.70
Oldsmobile	15,114	14,720	13,899	149,410	59,568	5.76	4.55
Mercury	11,830	5,599	8,846	86,366	43,338	3.33	3.31
Nash	8,175	7,710	8,636	86,301	64,499	3.32	4.92
Studebaker	9,993	6,007	7,353	83,221	42,688	3.20	3.26
Hudson	4,601	6,990	7,234	79,359	56,085	3.06	4.28
Chrysler	8,333	7,802	6,277	77,053	52,642	2.97	4.02
De Soto	6,640	6,207	4,810	59,608	44,445	2.30	3.39
Cadillac	2,913	4,938	3,131	42,659	15,061	1.64	1.15
Kaiser	6,643	5,178	133	40,173	138	1.55	.01
Packard	4,503	4,449	4,579	38,293	25,726	1.47	1.96
Frazer	6,181	5,333	119	38,204	124	1.47	.01
Willys	2,256	1,803	219	19,682	241	.76	.02
Lincoln	2,198	1,345	1,437	19,599	7,361	.75	.56
Crosley	1,476	1,487	616	13,134	1,264	.51	.10
All Others	43	87	74	681	441	.03	.03
Total	281,428	251,655	225,180	2,596,034	1,310,037	100.00	100.00

*—Data from R. L. Polk & Co.

Pop came back just in time to save one leak in a customer's battery and another leak from Larry's nose, stuck as usual belligerently into other people's business

by J. EDWARD FORD

Pop Assaults a Battery

The customer held up his hand. "You've said enough," he warned. "Where's the man who owns this shop?"

LARRY started to sop up the cleaning compound he had upset when he planted the heel of his Number Eleven shoe on the rim of the pan. He was cursing none too softly when Tommy came over and stood a moment, hesitating.

"Well, what do you want?" growled Larry.

"That man with the sick battery is back again," said Tommy.

"Can't you see I'm busy? Go take care of him yourself."

"He won't talk to me. He says he wants to see the man who recharged his battery the day before yesterday. That was you."

Larry squeezed the rag he had been using as a mop and watched the cleaning compound dribble into the pan.

"Aren't you going to see him?" asked Tommy.

"No," answered Larry. "If he don't like the way we charge batteries around here, sell him a new one."

Tommy waited a moment and then said, "Okay. I'll see Pop."

Larry sprang to his feet so quickly that his toe struck the pan and almost upset it again. "Tryin' to make trouble again are you?" he growled at the surprised boy.

"No," said Tommy. "But we've got a dissatisfied customer standing over there and *nobody* to get him straightened out."

Larry tossed the dripping rag over to a bench and wiped his hands on his coveralls. "The trouble with you is," he said, "you read a lotta baloney some place about a customer always bein' right."

"That's the way Pop always treats them."

"Well, it's a lotta malarkey. Customers is a bunch of chiselers and dead beats. The only trouble with that guy over there is, he's too cheap to lay out a few bucks for a new battery."

"He says you told him it was okay when you recharged it."

"Anybody can make a mistake once in a while, can't he? Look at the decision in the Louis-Walcott bout."

Tommy looked anxiously toward the door, where a tall man in a bulky overcoat was pacing up and down impatiently.

"But this isn't a fight," said Tommy. Then he grinned and added, "Unless that customer over there takes a swing at you."

Larry's lips twisted in a contemptuous grin. "Any customer that takes a poke at me," he said, "would make a lot less mess if he bailed out of a plane without a parachute."

"Maybe they ought to match *you* with Louis," said Tommy, "now that Jersey Joe has him softened up."

"They could do worse. Why when I was Louis's age I—"

"The customer is still waiting," Tommy reminded him.

"Okay," said Larry, giving his coveralls a hitch with his elbows. "If you wanta learn how to handle tough customers, come on over and cup your ear for this lesson."

Larry swaggered over to the customer. The latter looked a foot broader than Larry but the customer's size took none

(*Continued on page* 114)

MOTOR AGE
BASIC COURSE FOR
MECHANICAL TRAINING

CLEARING HOUSE

FOR SERVICEMEN'S QUERIES

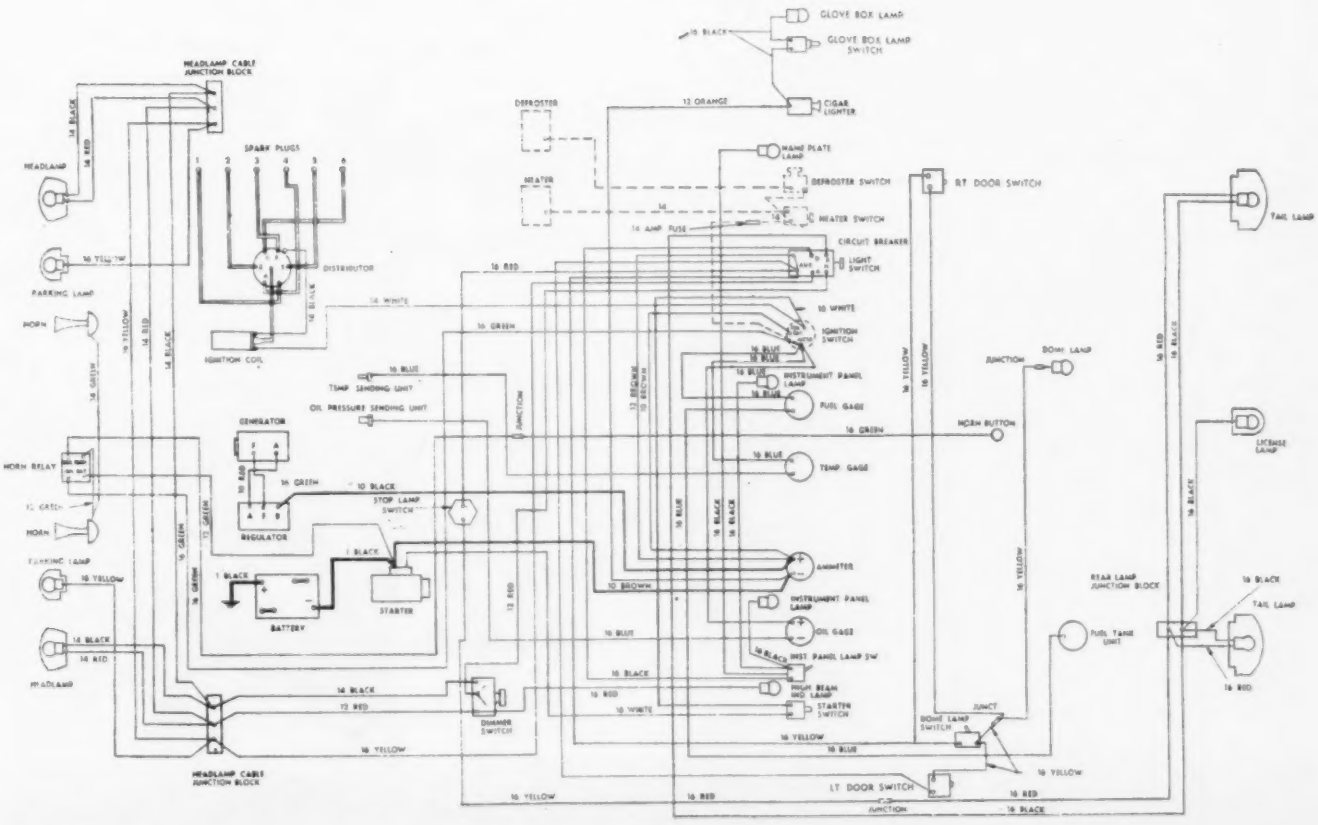
Bill Toboldt, Editor, Motor Age

Jeep Brakes Pull to Right In Spite of Brake Work

I have a very difficult problem. We have a new 1947 Willys Jeep which is used for towing and other roadside calls. The trouble is with the brakes. When the brakes are used the Jeep tends to pull toward the right. At times this pulling is more violent than at other times. I have put a lot of time on it but to no avail. The brakes have been adjusted numerous times. The wheels on the front were taken off. The right drum was very rough. Some dirt had gotten in and had ground ridges in the drum. The left drum was very smooth. The smoothest I've seen. New linings were put in but that didn't help. The Jeep still pulled to right. The drums were changed; that is, left drum on right and right drum on left, but the Jeep still pulled right. A brake drum from a different Jeep was put on, but it stilled pulled. The left brake hose was O.K. and everything else seems O.K. but the Jeep still pulls to right. Any suggestions will be highly appreciated.—Howard G. Gold, 463 Parket St., East Longmeadow, Mass.

ON THE trouble you are having with the Jeep brakes it occurs to me that quite possibly the trouble

Wiring diagram K-100 for Current Kaiser



is in the brake lines and I would suggest you replace the flexible brake lines to both the front wheels. If this does not overcome your trouble it is possible that the lining on one side or the other has been oil soaked or the trouble might be in the wheel cylinders. I would suggest you replace the wheel cylinders on the front wheel and the line and your trouble will be overcome.

Car Vibration Apparent At High Speed or Pulling

I have a 1940 model Buick, Super 50 Series. I have done about everything I know to correct a vibration in this car. I have lined and balanced all wheels, put in king pins and bushings also tie rod ends. Worm sector has been adjusted, universals have been checked. The motor has been pulled down and all main bearings are in perfect condition. The car has new motor supports. This car does not shimmy but when reaching about 45 or 50 miles an hour a bumping sound or vibration can be felt on the floor board. Only at this speed does the trouble occur. The vibration is greater when going up hill at 45 miles an hour than going down hill at 45 miles an hour. We specialize in Buicks and have had the same trouble occur before. Usually by replacing motor supports and transmission supports the trouble has been found, but in this one it did not seem to help. — Roy V. Ryan, Rt. 11 — Box 43A, San Antonio, Texas.

ON YOUR 1940 Buick which has a bad vibration, it is not clear from your letter whether this is in the engine or whether it might be in the wheels and running gear. I would, therefore, suggest that you idle the engine at a speed comparable to 45-50 mph road speed to see if the vibration shows up under these conditions. If it does, your vibration obviously is not in the wheels or propeller shaft. If the vibration shows up with the engine idling, I would suggest you carefully examine the fan belt and also the fan blades. If the fan belt is ragged or has started to separate, it is quite possibly the cause of your difficulty. Make sure the fan blades are not bent, for as you know, mechanics very often turn the engine by pulling on the fan blades and in that way they become bent. This, of course, is rather difficult to ascertain on those cars which have the non-symmetrical arrangement of the blades.

I would also suggest you check the clutch and make sure the clutch cover is in the groove, otherwise you will get a vibration as a result of unbalance.

You say you have checked the universal. It is worthwhile to double-check this to make sure that none of the needle bearings have become broken or that the joint is otherwise defective.

I note you have installed new motor supports and in this connection I would suggest you loosen them and then retighten, making sure they are tightened equally after the engine has been rocked a bit by hand to make sure it is seated evenly in the engine mountings.

Exhaust Valves Stick On a 1939 Oldsmobile

Recently we installed a reconditioned motor in a 1939 Oldsmobile, 6-cylinder. The car motor had oversize valve tappets, new valve guides, new pistons, rings and bearings. Since installing motor, No. 3 and No. 4 exhaust valves on a haul or at high speed stick—sometimes to the extent that you have to remove the spark plugs and drive the valves down.

We drilled the valve guides a little larger and installed two new valves and all new valve springs but we still have the same trouble. We also removed the water tube in engine and cleaned same but the condition is still there.

We are at a loss as to what to do as the motor has plenty of snap.— Edward Schrock, 430 Central Ave., Johnstown, Pa.

IN regard to the difficulty you are experiencing with sticking valves on your 1939 Oldsmobile Six, I think you are on the right track when you cleaned out the water tube. In your letter you do not state that you replaced it. If you have not, this should be done as it directs the flow of water against

(*Continued on page* 76)

BUTCH . . . . .

Last year was Studebaker's all-time high year in car and truck production!

Studebaker begins 1948 with production facilities still further expanded!

Every former record for daily, weekly and monthly output was surpassed!

The 190,000 units built by Studebaker in 1947 exceed by 30% the production of the best previous year!

Now watch Studebaker go in 1948!

Electrical System Specifications—1947-1948 Cars

Make and Model	Ignition					Spark Plugs				Battery		Starter					Generator		
				Timing										Flywheel				Charging Rate	
	Make	Point Gap (In.)	Cam Angle (Deg.)	Spark Occurs Deg.—TDC.	Marks on	Make	Model	Thread Size	Gap (In.)	Make	Capacity—Amp. Hrs. at 20-hr. rate	Make	Type of Drive	Number of Teeth	Ratio to Starter	To Start Motor	Make	Amperes	Car Speed—mph
Buick Special 40	DR	.015	31	4BT	Fly	AC	48	14	.025	DR	100	DR	OC	146	16.22	Dap	DR	33	25
Buick Super 50	DR	.015	31	4BT	Fly	AC	48	14	.025	DR	100	DR	OC	146	16.22	Dap	DR	33	25
Buick Roadmaster 70	DR	.015	31	6BT	Fly	AC	48	14	.025	DR	120	DR	OC	156	17.33	Dap	DR	33	25
Cadillac 61	DR	.015	31	5BT	Vd	AC	104	10	.030	DR	115	DR	OC	156	17.00	Dpd	DR	35	22
Cadillac 62	DR	.015	31	5BT	Vd	AC	104	10	.030	DR	115	DR	OC	156	17.00	Dpd	DR	35	22
Cadillac 60S	DR	.015	31	5BT	Vd	AC	104	10	.030	DR	115	DR	OC	156	17.00	Dpd	DR	35	22
Cadillac 75	DR	.015	31	5BT	Vd	AC	104	10	.030	DR	115	DR	OC	156	17.00	Dpd	DR	35	22
Chevrolet EJ-EK	DR	.021	34	5BT	Fly	AC	M8	10	.040	DR	100	DR	OC	139	15.44	Dsp	DR	35	28
Chrysler C-38	AL	.020	36	2AT	Vd	AL	.....	14	.025	Wil	120	AL	OC	146	16.22	Dpd	AL	35	25
Chrysler C-39	AL	.018	29	2AT	Vd	AL	.....	14	.025	AL	135	AL	OC	146	16.22	Dpd	AL	35	26
Chrysler C-40	AL	.018	29	2AT	Vd	AL	.....	14	.025	AL	135	AL	OC	146	16.22	Dpd	AL	40	24
Crosley	AL	.020	46	12BT	Fly	AL	A7	14	.025	AL	80	AL	Ben	89	8.80	Pbd	AL	9.5	40
De Soto S-11	AL	.020	36	TC	Vd	AL	.....	14	.025	Wil	110	AL	OC	146	16.22	Dpd	AL	35	25
Dodge D-24	AL	.020	36	2AT	Vd	AL	.....	14	.025	AL	105	AL	Ben	.....	.....	Dpd	AL	35	25
Ford 87HA	Own	.015	36	1BT	N	CH	H10	14	.026	Var	100	Own	Ben	112	11.20	Dpd	Own	30	22
Ford 89A	Own	.015	36	4BT	N	CH	H10	14	.025	Var	120	Own	Ben	112	11.20	Dpd	Own	30	21
Frazer F-47	AL	.020	38	.....	Fly	CH	.....	14	.032	AL	105	AL	Ben	130	14.50	Dpd	AL	35	20
Hudson 6, 481-482	AL	.020	38	TC	Fly	CH	J9	14	.038	Nat	120	AL	Ben	134	14.90	Dpd	AL	43	35
Hudson 6, 483-484	AL	.....	27	TC	Fly	CH	H10	14	.038	Nat	120	AL	Ben	134	14.90	Dpd	AL	43	35
Kaiser K-100	AL	.020	38	TC	Fly	CH	J9	14	.032	AL	105	AL	Ben	130	14.50	Dpd	AL	35	20
Lincoln 876H	Own	.015	36	2BT	N	CH	H9	14	.027	Var	120	Own	Ben	112	11.20	Dpd	Own	30	22
Mercury 89M	Own	.015	36	4BT	.....	CH	H10	14	.025	Var	120	Own	Ben	112	11.20	Dpd	Own	30	22
Nash 4840	AL	.020	.....	TC	Vd	AL	A5	14	.025	AL	90	AL	.....	122	.....	.....	AL	35	.....
Nash 4860	AL	.020	.....	TC	Vd	AC	44	14	.025	AL	105	AL	Ben	.....	.....	.....	AL	35	.....
Oldsmobile 66	DR	.020	35	TC	Fly	AC	48	14	.040	DR	100	DR	OC	145	16.11	Dsp	DR	33	21
Oldsmobile 76	DR	.020	35	TC	Fly	AC	48	14	.040	DR	100	DR	OC	145	16.11	Dsp	DR	33	21
Oldsmobile 68	DR	.015	31	2BT	Fly	AC	48	14	.030	DR	120	DR	OC	145	16.11	Dsp	DR	33	21
Oldsmobile 78	DR	.015	31	2BT	Fly	AC	48	14	.030	DR	120	DR	OC	145	16.11	Dsp	DR	33	21
Oldsmobile 98	DR	.015	31	2BT	Fly	AC	48	14	.030	DR	120	DR	OC	145	16.11	Dpd	DR	33	21
Packard 8-2201, 2211	A-D	.015	.....	6BT	.....	(a)	(a)	10	.027	W-A	100	A-D	Ben	140	.....	.....	A-D	35	.....
Packard Sup. 8—2202, 2232	A-D	.015	.....	6BT	.....	(a)	(a)	10	.027	W-A	100	A-D	Ben	140	.....	.....	A-D	35	.....
Packard Cus. 8—2206, 2233	AL	.015	.....	6BT	.....	(a)	(a)	10	.027	AL	120	AL	.....	140	.....	.....	AL	35	.....
Plymouth P-15	AL	.020	36	TC	Vd	AL	.....	14	.025	AL	95	.....	Ben	146	16.22	Dpd	AL	35	25
Pontiac 6-25	DR	.020	37	4BT	Fly	AC	45	14	.025	DR	100	DR	Ben	.....	15.55	Dsp	DR	33	25
Pontiac 6-26	DR	.020	37	4BT	Fly	AC	45	14	.025	DR	100	DR	Ben	.....	15.55	Dsp	DR	33	25
Pontiac 8-27	DR	.020	31	4BT	Fly	AC	45	14	.025	DR	100	DR	Ben	.....	15.55	Dsp	DR	33	25
Pontiac 8-28	DR	.020	31	4BT	Fly	AC.	45	14	.025	DR	100	DR	Ben	.....	15.55	Dsp	DR	33	25
Studebaker 7G	AL	.020	35	2BT	Vd	CH	J7	14	.025	Wil	100	AL	Ben	124	13.77	Dcp	AL	35	18
Studebaker 15A	AL	.020	35	2BT	Vd	CH	J7	14	.025	Wil	100	AL	Ben	133	14.78	Dcp	AL	35	19
Willys 663	AL	.020	.....	TC	.....	AL	A7	14	.030	AL	100	AL	.....	.....	.....	.....	AL	.....	.....

ABBREVIATIONS

(a)—Auto-Lite P4, AC104 or Champion Y4A.
AC—AC Spark Plug Division.
A-D—Auto-Lite and Delco-Remy.
AL—The Electric Auto-Lite Co.
AT—After Top Center.
BT—Before Top Center.
Ben—Bendix-type drive.
CH—Champion Spark Plug Co.
Dap—Turn on ignition and depress accelerator pedal.
Dcp—Turn on ignition and depress clutch pedal.
Dpd—Turn on ignition and press button on dash board.
Dsp—Turn on ignition and depress starter pedal.
DR—Delco-Remy Division.
Fly—Flywheel.
N—No or None.
Nat—National Battery Co.
OC—Overrunning clutch.
Pbd—Turn on ignition and pull button on dash board.
Var—Various.
Vd—Vibration dampener.
W-A—Willard and Auto-Lite.
Wil—Willard Storage Battery Co.

Readers Clearing House . . . (*Continued from page* 74)

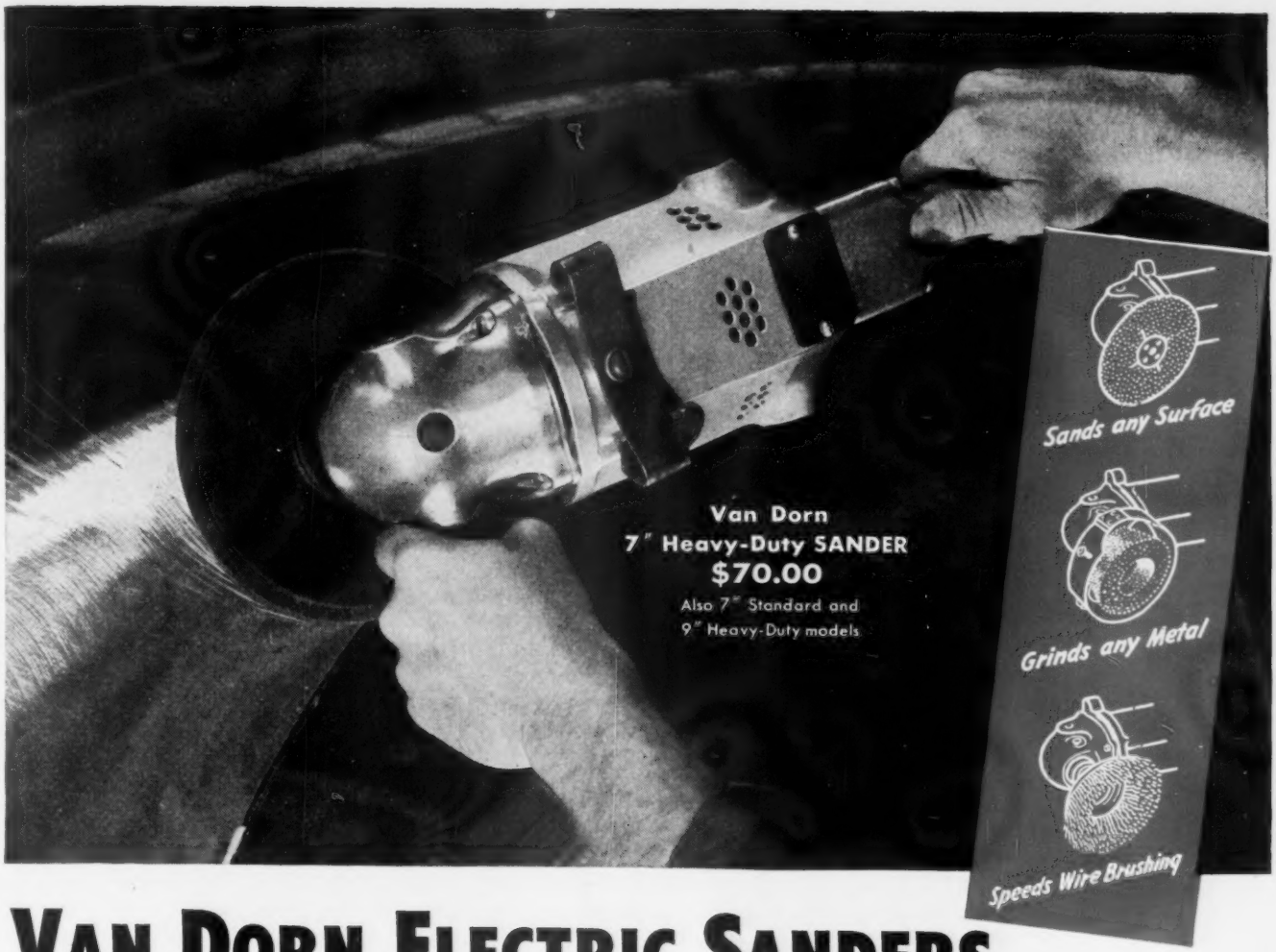
the under side of the valve seats in order to keep them as well as the valves cooler.

Before replacing the water tube I would suggest you thoroughly clean the engine water jacket. In general the cleaning compounds manufactured for that purpose are satisfactory. In some few instances, in localities where the water has a high calcium content, the scale in the water jacket is so hard that it is necessary to use a dilute solution of hydrochloric acid to remove it. The solution should be five parts water and one part acid. Be sure it is used in the water jacket only and not in the radiator as it is much too strong for copper, brass or lead.

In addition, I suggest that you counter-bore the valve guides at the top. This counter-bore should be approximately 1/16 in. larger in diameter than the diameter of the valve stem and should go down into the valve stem approximately 3/8 in.

Ford Truck Burns Points After Distributor Work

I am having trouble with a '45 Ford truck keeping distributor
(*Continued on page* 78)



VAN DORN ELECTRIC SANDERS

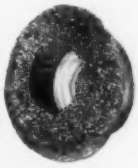
Are Packed with POWER to Push Up Your PROFITS!

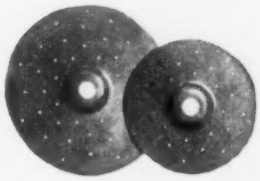
From sanding fenders to cutting off old bolts and studs, powerful Van Dorn Portable Electric Sanders do so many jobs quickly and efficiently that you'll rate them among the hardest-working, most profitable tools in your shop! Remember, these versatile Sanders do more than drive abrasive discs; they also drive Van Dorn "Whirlwind" Wire Cup Brushes and Saucer Grinding Wheels. And that means *extra profits* for you from handling many more body and engine jobs!

To deliver this top-notch service, Van Dorn Sanders are built with outstanding features such as powerful Van Dorn-built universal motors—matched and lapped spiral bevel gears of heat-treated alloy for smooth, trouble-free running—complete protective sealing against dust and dirt for switches, commutators, bearings and all vital parts. Ask your nearby Van Dorn Distributor for additional details on these money-making tools. Write for free catalog to: The Van Dorn Electric Tool Co., 727 Joppa Road, Towson 4, Maryland.

Order These
VAN DORN ACCESSORIES
for Finest SANDER Performance!

"WHIRLWIND" WIRE CUP BRUSHES are designed and built right in our plant to give longer life, better brushing surface.





"KOOLFLEX" BACKING PADS give greater flexibility, cooler operation, longer life on sanding jobs. These light-weight, fabric-base, plastic-bonded discs are great for "feathering" finish, too!

FOR POWER SPECIFY

"Van Dorn"

(DIV. OF BLACK & DECKER MFG. CO.)

PORTABLE ELECTRIC TOOLS

Lubricating, Fuel and Cooling System For 1947-48 Passenger Cars

MAKE AND MODEL	LUBRICATION									FUEL SYSTEMS								COOLING SYSTEM			
		Oil Pressure To —									Carburetor							Radiator			
	Type	Main Bearings	Connecting Rods	Wristpins	Camshaft Bearings	Tappets	Normal Oil Pressure Lbs. at Mph.	Crankcase Capacity Qts.—Refill	External Oil Filter—Make	Tank Capacity—Gal.	Make	Model Number	Size (In.)	Type	Automatic Choke—Make	Air Cleaner—Make	Muffler—Make	Type	Make	Capacity—Qts.	Full Length Water Jackets
Buick ... Special 40	P	Y	Y	N	Y	N	45 @ 35	5½	N	19	S-C	(a)	1	DD	S-C	AC	.....	VC	Har	13	N
Buick ... Special 50	P	Y	Y	N	Y	N	45 @ 35	5½	N	19	S-C	(a)	1	DD	S-C	AC	.....	VC	Har	13	N
Buick ... Roadmaster 70	P	Y	Y	N	Y	N	45 @ 35	7	N	19	S-C	(b)	1¼	DD	S-C	AC	.....	VC	Har	16¾	N
Cadillac ... 61	P	Y	Y	Y	Y	Y	30 @ 30	7*	N	20	S-C	(c)	1¼	DD	S-C	AC	Wal	TF	Har	25	Y
Cadillac ... 62	P	Y	Y	Y	Y	Y	30 @ 30	7*	N	20	S-C	(c)	1¼	DD	S-C	AC	Wal	TF	Har	25	Y
Cadillac ... 60S	P	Y	Y	Y	Y	Y	30 @ 30	7*	N	20	S-C	(c)	1¼	DD	S-C	AC	Wal	TF	Har	25	Y
Cadillac ... 75	P	Y	Y	Y	Y	Y	30 @ 30	7*	N	24	S-C	(c)	1¼	DD	S-C	AC	Wal	TF	Har	25	Y
Chevrolet ... EJ-EK	(d)	Y	(e)	N	Y	N	14 @ 39	5	N	16	Car	WI-574S	1¼	SD	N	AC	Var	CI	Har	15	Y
Chrysler ... C-38	P	Y	Y	N	Y	....	.....	5	.....	17	Car	.....	1½	SD	Sis	AC	.....	CI	.....	17	Y
Chrysler ... C-39	P	Y	Y	N	Y	....	.....	6	.....	20	Str	.....	1¼	DD	Str	AC	.....	TF	.....	26	Y
Chrysler ... C-40	P	Y	Y	N	Y	....	.....	6	.....	20	Str	.....	1¼	DD	Str	AC	.....	TF	.....	26	Y
Crosley ...	P	Y	Y	N	Y	N	40 @ 20	3	Fram	6¾	Til	DY-9B	⅞	SD	N	AC	Own	TF	Yg	5	N
De Soto ... S-11	P	Y	Y	N	Y	....	.....	5	.....	17	Car	.....	1½	SD	Sis	AC	.....	CI	.....	17	Y
Dodge ... D-24	P	Y	Y	N	Y	....	.....	5	.....	17	Str	.....	1½	SD	Str	AC	.....	CI	.....	15	Y
Ford ... 87HA	P	Y	Y	N	Y	Y	35 @ 45	5	F. K.	17	Hol	5GA-9510	1¼‡	SD	N	Way	NS	TF	Var	14½	Y
Ford ... 89A	P	Y	Y	N	Y	N	55 @ 60	5	Fram	17	Hol	94	1	DD	N	Uni	NS	TF	Var	22	Y
Frazer ... F-47	P	Y	Y	N	Y	Y	35 @ 30	5	.....	21	Car	.....	1¼	SD	Y	Y	.....	CI	.....	15	Y
Hudson ... 6, 481-482	P	Y	Y	Y	N	Y	.....	7	Mic	20	Car	WDO-647S	1¼	DD	Car	AC	Old	TF	Mc	18	Y
Hudson ... 8, 483-484	S	N	N	N	N	N	.....	7	Mic	20	Car	WDO-648S	1¼	DD	Car	AC	Old	TF	Mc	18	N
Kaiser ... K-100	P	Y	Y	N	Y	Y	35 @ 30	5	.....	21	Car	.....	1¼	SD	Y	Y	.....	CI	.....	15	Y
Lincoln ... 876H	P	Y	Y	N	Y	Y	40 @ ..	5	Fram	19½	Hol	AA-1	1	DD	N	Uni	Old	TF	MM	24½	Y
Mercury ... 89M	P	Y	Y	N	Y	N	50 @ 45	5	Fram	17	Own	59A-9510	1	DD	N	WO	NS	TF	Var	22	Y
Nash ... 4840	P	Y	Y	Y	Y	Y	30 @ 20	5	N	20	Car	WAI-611S	1¼	SD	Car	AC	Wal	TF	Mc	14	Y
Nash ... 4860	P	Y	Y	Y	Y	Y	30 @ 20	6	Pur	20	Car	WAI-464S	1¼	SD	Car	AC	Wal	TF	Mc	17	Y
Oldsmobile ... 66	P	Y	Y	Y	Y	N	30 @ ..	5	N	19	Car	WAI	1½	SD	Car	AC	Var	VC	Har	18½	Y
Oldsmobile ... 76	P	Y	Y	Y	Y	N	30 @ ..	5	N	19	Car	W-1	1½	SD	Car	AC	Var	VC	Har	18½	Y
Oldsmobile ... 68	P	Y	Y	Y	Y	N	30 @ ..	6	N	19	Car	WDO	1¼	DD	Car	AC	Var	VC	Har	20½	Y
Oldsmobile ... 78	P	Y	Y	Y	Y	N	30 @ ..	6	N	19	Car	WDO	1¼	DD	Car	AC	Var	VC	Har	20½	Y
Oldsmobile ... 98	P	Y	Y	Y	Y	N	30 @ ..	6	N	19	Car	WDO	1¼	DD	Car	AC	Var	VC	Har	20½	Y
Packard ... 8-2201, 2211	P	Y	Y	Y	Y	Y	40 @ ..	6	N	17	Car	WDO-644S	1¼	DD	Y	AC	.....	TF	.....	18	....
Packard ... Sup. 8—2202, 2232	P	Y	Y	Y	Y	Y	40 @ ..	6	N	20	Car	WDO-643S	1¼	DD	Y	AC	.....	TF	.....	20	....
Packard ... Cus. 8—2206, 2233	P	Y	Y	Y	Y	Y	50 @ ..	7	Y	20	Car	WDO-531S	1¼	DD	Y	AC	.....	TF	.....	20	....
Plymouth ... P-15	P	Y	Y	N	Y	....	40 @ ..	5	Y	17	Car	.....	1½	SD	N	AC	.....	CI	.....	15	Y
Pontiac ... 6-25	P	Y	Y	Y	Y	N	35 @ 40	5	N	17	Car	WAI-537-5	1¼	SD	Car	AC	Var	CI	Har	18	Y
Pontiac ... 6-26	P	Y	Y	Y	Y	N	35 @ 40	5	N	17	Car	WAI-537-5	1¼	SD	Car	AC	Var	CI	Har	18	Y
Pontiac ... 8-27	P	Y	Y	Y	Y	N	35 @ 40	5	N	17	Car	WDO-548S	1¼	SD	Car	AC	Var	CI	Har	19½	Y
Pontiac ... 8-28	P	Y	Y	Y	Y	N	35 @ 40	5	N	17	Car	WDO-548S	1¼	SD	Car	AC	Var	CI	Har	19½	Y
Studebaker ... 7G	P	Y	Y	N	Y	Y	40 @ 25	3	N	17	Car	WE-532S	1¼	SD	Car	AC	Wal	TF	Mc	10	Y
Studebaker ... 15A	P	Y	Y	N	Y	Y	40 @ 25	4	Fram	17	Str	BXOV-26	1¼	SD	Str	AC	Wal	TF	Mc	13	Y
Willys ... 663	(d)	Y	Y	N	Y	N	35 @ ..	5	.....	15	Car	WO-631S	1¼	SD	.....	.....	.....	CI	.....	12	....

ABBREVIATIONS:

(a)—Stromberg AAV-16, Carter WOD608S
(b)—Stromberg AAV-26, Carter WOD609S
(c)—Stromberg AAV-26, Carter 595S
* Dry
‡—Venturi size.

AC—AC Spark Plug Division
CI—Cellular
DD—Dual downdraft
(d)—Pressure, pressure steam and splash
(e)—Pressure steam
F-K—Fram and King-Seeley
Har—Harrison Radiator Division
Hol—Holley Carburetor Co.
Mc—McCord Radiator Co.
Mic—Michiana Products Corp.
MM—McCord and Modine
N—No or none
Old—Oldberg Mfg. Co.
P—Pressure system
Pur—Purolator Products Inc.
S—Splash
SD—Single downdraft
TF—Tube and fin
Uni—United Air Cleaner Div.
Var—Various
VC—Vee cellular
Wal—Walker Manufacturing Co.
Way—Wayne Industrial
WO—Wayne and Oakes
Y—Yes
Yg—Young Radiator Co.

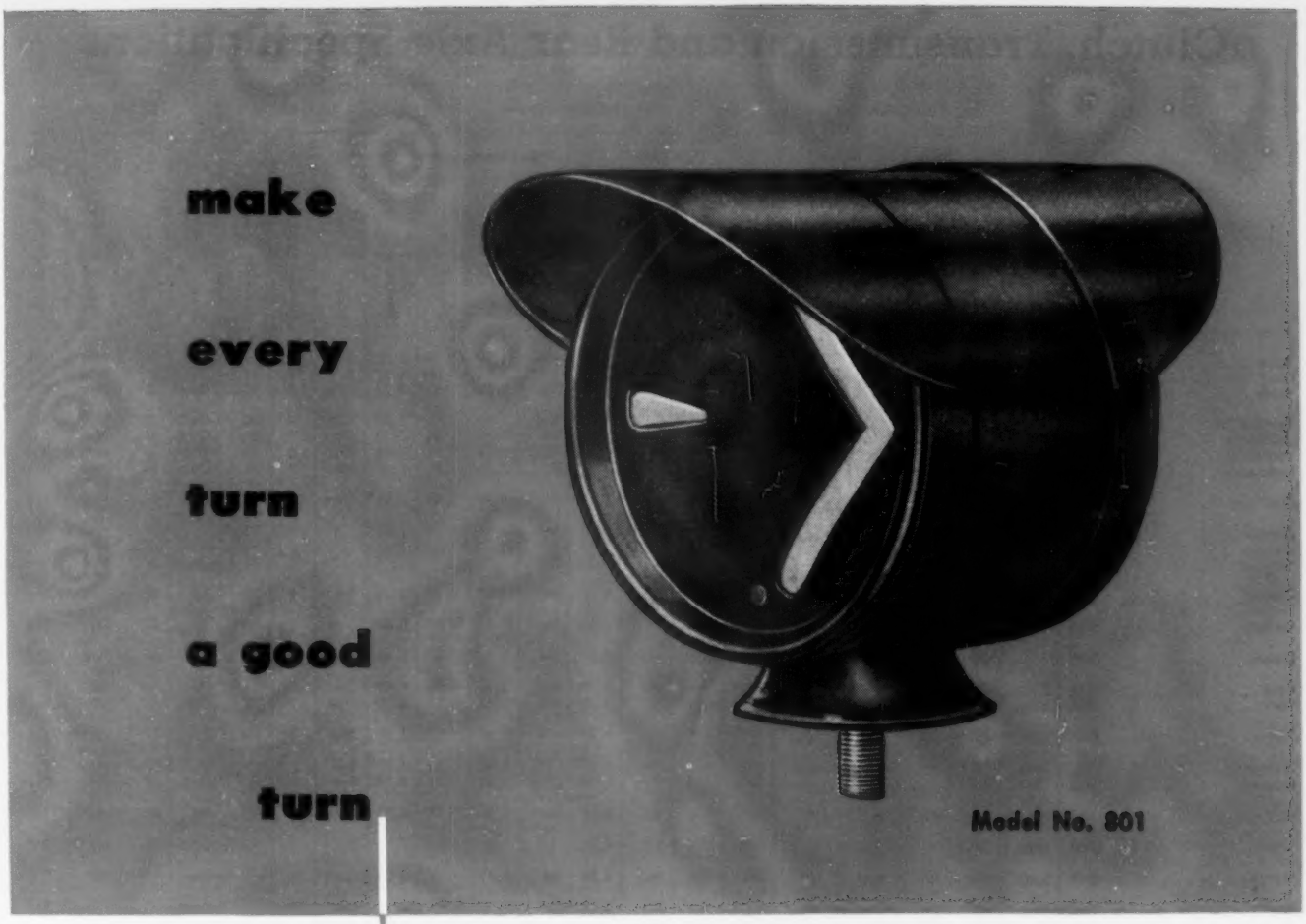
Readers Clearing House . . . (*Continued from page* 76)

points. One side seems to burn out in a month. We have checked the coil and condenser and replaced the distributor with a new one. Also have checked the voltage from the generator. This Ford truck has a feed mill on it, the truck motor furnishes power for the mill.—Mark E. Garvin, Box 322, Marcus, Iowa.

THERE are several reasons why distributer points on the 1945 Ford truck may burn frequently. First, the difficulty might be a defective condenser; second, excess voltage and third, the points might not be properly synchronized. I note you have already checked the condenser but as you know, it is very difficult to get a reliable test on a condenser and I would suggest you try a brand new condenser just to be sure that is not the source of your difficulty.

In regard to the voltage—it is

(*Continued on page* 80)



sell

ARROW DIRECTIONAL SIGNALS

WHEN IT COMES to calling the turn on the highways, fleets the country over prefer Arrow Directional Signals. They're safe. They're sure. They're sure-fire best-sellers.

Arrow Directional Signal No. 801, shown above, is doubly safe . . . because it's highly visible from both front and rear. It's 4″ in diameter, has an amber plastic lens, and the finish is baked-on black enamel. There are a variety of other State-approved Arrow Directional Signals . . . all of them sturdily built for long-lasting, trouble-free performance. Among these are the single-faced or flush-type lights Nos. 701 and 901, shown on the left.

A good signal requires a good switch. Arrow fills the need with No. N-250, a compact, streamlined, die-cast unit, easily operated with a flick of the finger . . . or No. 475, a heavy-duty, truck-type switch. Both switches have tell-tale pilot lights to indicate when the signal is lighted.

Arrow makes a complete line of *safety after dark* equipment, for use from bumper to tailboard. Distributed through Arrow jobbers from coast to coast.

Arrow No. 701 Directional Signal
4″ single-faced light for installation on body, fender or frame

Arrow No. 901 Directional Signal
5 3/16″ light with recessed body for flush mounting

SAFETY AFTER DARK

ARROW SAFETY DEVICE COMPANY

MOUNT HOLLY, NEW JERSEY

ARROW

Clutch, Transmission and Rear Axle Specifications

MAKE AND MODEL	CLUTCH					TRANSMISSION								UNIVERSAL			REAR AXLE			
				Facings			Gear Shift			Transmission Gears Ratio										
	Make	Drive Type	Through Fluid Flywheel	Inside Diam.	Outside Diam.	Make	Manual	Automatic	Rear Axle Ratio	Overdrive	Low	Second	Reverse	Make	Number Used	Drive Medium	Make	Type	Type of Gearing	Min. Road Clearance
Buick Special 40	Own*	Dff	No	6	10	Own	Yes	No	4.45	No	2.67	1.66	3.02	S-S	1	TT	Own	SF	Hyp	7 11/16
Buick Super 50	Own*	Dff	No	6	10	Own	Yes	No	4.45	No	2.67	1.66	3.02	S-S	1	TT	Own	SF	Hyp	7 11/16
Buick Roadmaster 70	Own*	Dff	No	6½	10½	Own	Yes	No	4.11	No	2.39	1.53	2.53	Sag	1	TT	Own	SF	Hyp	7 13/16
Cadillac 61	Long	Dff	No	7	10½	Own	Yes	•	3.77	No	2.39	1.53	2.39	Mec	2	Spr	Own	SF	Hyp	8
Cadillac 62	Long	Dff	No	7	10½	Own	Yes	•	3.77	No	2.39	1.53	2.39	Mec	2	Spr	Own	SF	Hyp	8
Cadillac 60S	Long	Dff	No	7	10½	Own	Yes	•	3.77	No	2.39	1.53	2.39	Mec	2	Spr	Own	SF	Hyp	8
Cadillac 75	Long	Dff	No	7	11	Own	Yes	•	4.27	No	2.39	1.53	2.39	Mec	2	Spr	Own	SF	Hyp	9
Chevrolet EJ-EK	(a)	Dff	No	6⅛	9⅛	Own	Yes	••	4.11	No	2.94	1.68	2.94	Own	1	Spr	Own	SF	Hyp	7⅞
Chrysler C-38	.....	Dff	†	7	10	.....	Yes	‡	3.91	No	2.57	1.83	3.48	.....	2	RS	.....	SF	Hyp	8⅝
Chrysler C-39	.....	FC	Yes	6	10	.....	Yes	‡	3.91	No	2.57	1.83	3.48	.....	2	RS	.....	SF	Hyp	8¾
Chrysler C-40	.....	FC	Yes	6	10	.....	Yes	†	3.58	No	▲	▲	▲	.....	3	RS	.....	SF	Hyp	9 1/16
Crosley	Roc	Dff	No	4	6	WG	Yes	No	5.17	No	3.29	1.72	3.29	Spi	1	TT	Spi	SF	SB	6½
De Soto S-11	.....	Dff	‡	7	10	.....	Yes	‡	3.91	No	2.57	1.83	3.48	.....	2	RS	.....	SF	Hyp	8⅝
Dodge D-24	.....	Dff	‡	7	10	.....	Yes	No	(b)	No	2.57	1.83	3.48	.....	2	RS	.....	SF	Hyp	8⅝
Ford 87HA	Long	Dff	No	6¾	10	Own	Yes	No	3.78	No	3.40	1.77	4.00	Own	1	TT	Own	¾F	SB	8.14
Ford 89A	Long	Dff	No	6¾	10	Own	Yes	No	3.78	No	3.11	1.77	4.00	Own	1	TT	Own	¾F	SB	8.14
Frazer F-47	BB	Dff	No	6	9¼	WG	Yes	No	4.27	.70	2.57	1.55	3.49	Mec	3	Spr	Spi	SF	Hyp	7⅛
Hudson 6, 481-482	Own	Dff	No	6⅜	9 11/16	Own	Yes	■	4.10	.72♠	2.61	1.65	3.17	Spi	3	Spr	Own	SF	Hyp	7.83
Hudson 8, 482-484	Own	Dff	No	6⅜	9 11/16	Own	Yes	■	4.10	.72♠	2.61	1.65	3.17	Spi	3	Spr	Own	SF	Hyp	7.83
Kaiser K-100	BB	Dff	No	6	9¼	WG	Yes	No	4.27	No	2.57	1.55	3.49	Mec	3	Spr	Spi	SF	Hyp	7⅛
Lincoln 876H	Long	Dff	No	6¾	10	Own	Yes	No	4.22	.70	2.12	1.44	2.73	Spi	1	TR	Own	¾F	Hyp	8.1
Mercury 89M	Long	Dff	No	6¾	10	Own	Yes	No	3.54	No	3.11	1.77	4.00	Own	1	TT	Own	¾F	SB	7.84
Nash 4840	BB	Dff	No	5⅜	8	Own	Yes	No	4.10	No	2.57	1.62	3.48	Mec	2	TT	Own	SF	Hyp	8½
Nash 4860	BB	Dff	No	7	10	Own	Yes	No	4.10	.70♠	2.57	1.55	3.48	Mec	2	Spr	Own	SF	Hyp	8½
Oldsmobile 66	BB	Dff	No	6	9¼	Own	Yes	•	4.30	No	2.67	1.66	3.00	Mec	2	SA	Own	SF	Hyp	7 11/16
Oldsmobile 76	BB	Dff	No	6	9¼	Own	Yes	•	4.55	No	2.67	1.66	3.00	Mec	2	SA	Own	SF	Hyp	8 3/16
Oldsmobile 68	BB	Dff	No	7	10	Own	Yes	•	4.30	No	2.67	1.66	3.02	Mec	2	SA	Own	SF	Hyp	7 13/16
Oldsmobile 78	BB	Dff	No	7	10	Own	Yes	•	4.30	No	2.67	1.66	3.02	Mec	2	SA	Own	SF	Hyp	8 3/16
Oldsmobile 98	BB	Dff	No	7	10	Own	Yes	•	4.55	No	2.67	1.66	3.02	Mec	2	SA	Own	SF	Hyp	8 3/16
Packard 8-2201, 2211	Long	Dff	††	6¾	10	Own	Yes	No	3.90	.76♠	2.43	1.53	3.16	Mec	2	RS	Own	SF	Hyp	.....
Packard Sup. 8—2202, 2232	Long	Dff	††	7	10½	Own	Yes	No	3.90	.76♠	2.43	1.53	3.16	Mec	2	RS	Own	SF	Hyp	.....
Packard Cus. 8—2206, 2233	Long	Dff	††	7	11	Own	Yes	No	3.92	.75♠	2.43	1.53	3.16	Mec	2	RS	Own	SF	Hyp	.....
Plymouth P-15	.....	Dff	No	6	9¼	.....	Yes	No	3.90	No	2.57	1.83	3.48	.....	2	RS	.....	SF	Hyp	8⅝
Pontiac 6-25	Inl	Dff	No	6	9½	Own	Yes	No	4.10	No	2.67	1.66	3.02	Mec	2	Spr	Own	SF	Hyp	8⅛
Pontiac 6-26	Inl	Dff	No	6	9½	Own	Yes	No	4.30	No	2.67	1.66	3.02	Mec	2	Spr	Own	SF	Hyp	8⅜
Pontiac 8-27	Inl	Dff	No	6	9½	Own	Yes	No	4.10	No	2.67	1.66	3.02	Mec	2	Spr	Own	SF	Hyp	8⅛
Pontiac 8-28	Inl	Dff	No	6	9½	Own	Yes	No	4.30	No	2.67	1.66	3.02	Mec	2	Spr	Own	SF	Hyp	8⅜
Studebaker 7G	BB	Dff	No	5⅜	8	WG	Yes	No	4.10	.70♠	2.60	1.63	3.53	Spi	3	Spr	Spi	SF	Hyp	7½
Studebaker 15A	BB	Dff	No	6	9¼	WG	Yes	No	4.09	.70♠	2.57	1.55	3.48	Spi	3	Spr	Spi	SF	Hyp	7½
Willys 663	.....	Dff	No	.....	.....	WG	Yes	No	5.38	.70	2.60	1.63	3.53	.....	.....	.....	.....	SF	Hyp	.....

ABBREVIATIONS:

*—Disc by Long or Borg & Beck.
**—Bendix vacuum assist.
•—Hydra-Matic Drive, full automatic, hydraulically operated at extra cost.
‡—Through fluid coupling with semi-automatic transmission, at extra cost.
†—Semi-automatic, hydraulically operated.
††—Electromatic clutch available, at extra cost.
♠—At extra cost.
▲—Four spiral ratios; Direct, 1.00 to 1; Third, 1.75 to 1; Second, 2.04 to 1; First, 3.57 to 1; Reverse, 3.99 to 1.
■—Drive-Master vacuum-electric transmission with Vacumotive clutch, at extra cost.
(a)—Driven Disc—Own and Borg & Beck; remainder—Own and Inland.
(c)—4.11 for Conv. Cpe. and Sedans, 3.9 for Club Cpe. and 3.73 for 3-Pass. Cpe.
BB—Borg & Beck Div.
Dff—Direct to flywheel face.
FC—Fluid Coupling.
Hyp—Hypoid.
Inl—Inland Mfg. Co.
Long—Long Manufacturing Co.
Mec—Mechanics Universal Joint Div.
Roc—Rockford Drilling Machine Div.
RS—Rear springs.
SA—Stabilizing Arms.
SB—Spiral Bevel.
Sag—Saginaw Steering Gear Div.
SF—Semi-floating.
¾F—Three-quarter floating.
Spi—Spicer Mfg. Co.
Spr—Springs.
S-S—Saginaw or Spicer.
TR—Torque tubes and Radius Rods.
TT—Torque Tube.
WG—Warner Gear Div.

Readers Clearing House . . . (*Continued from page* 78)

not unusual to find even new regulators improperly set at the factory, making readjustment necessary when they are installed on the car.

In regard to synchronizing the points—there has been considerable difficulty in the field obtaining distributors, either new or rebuilt, on which the points have been correctly synchronized. I would strongly recommend that you secure a new distributor and then stand over the man and watch him synchronize the points so as to be absolutely sure the job has been done correctly.

Lack of Speed in First And Second Not Serious

I have a 1941 Buick 50 Series that I could use some help on. I have the complaint of no speed in first and second speed, but in third gear is plenty snappy. Now here is what I have done so far. First I rebuilt the engine, removed the dual carburetion and installed new

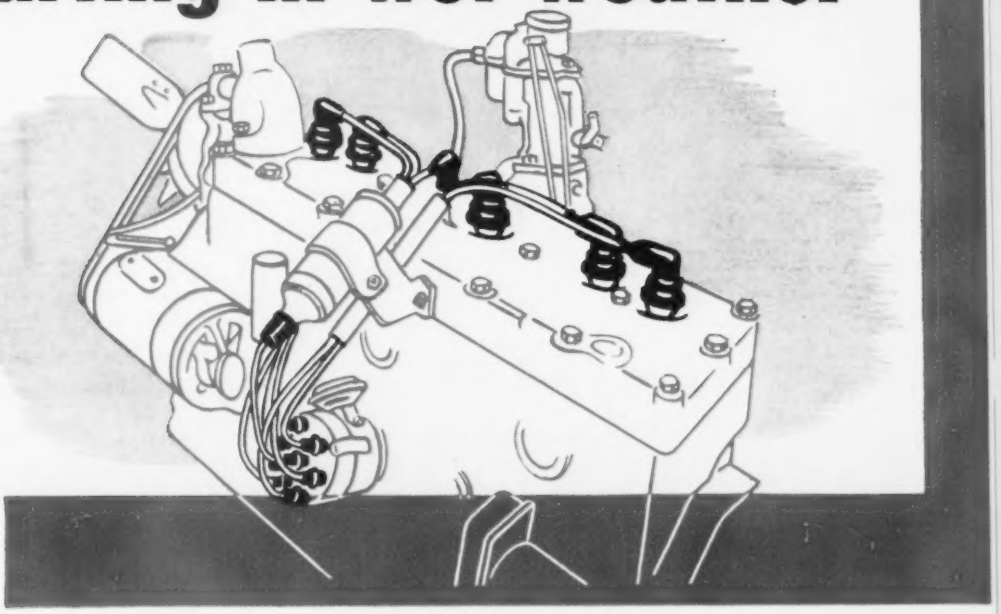
(*Continued on page* 82)

NEW PROTECTION
to aid starting in wet weather

Prevents ignition shorting by driving rain

Prevents engine stalling by splashes of water

Protects ignition from high humidity



It's here . . . the wet weather ignition protection you've been looking for!

It's *MōPAR Evr-Dry Shielding!* This new development by Chrysler Corporation engineers helps stop engine stalling and starting failures caused by wet spark plugs and connections. It's factory engineered and inspected for Plymouth, Dodge, De Soto and Chrysler cars and Dodge *"Job-Rated"* Trucks.

MōPAR Evr-Dry Shielding comes in easy-to-install packaged sets. Each set includes covers, mounting bases and terminals for spark plugs, and protective nipples for ignition coil and distributor cap. All parts are heat- and corrosion-resistant.

There are three reasons why motorists—*and you*—benefit from MōPAR Evr-Dry Shielding.

1—KEEPS SPARK PLUGS DRY

Spark plug covers and mounting bases shield plugs—keep moisture out. Nipples keep moisture from coil and distributor.

2—HELPS CONSERVE FUEL

Protection of the spark plugs and high tension connections cuts down uneven firing.

3—EASY TO INSTALL

Complete installation of MōPAR Evr-Dry Shielding takes less than an hour!

So plan now to show *your* customers how to get quick, dependable starting in wet weather. Recommend and install MōPAR Evr-Dry Shielding. You can get this business-builder from Plymouth, Dodge, De Soto or Chrysler dealers.

CHRYSLER CORPORATION—PARTS DIVISION—DETROIT 31, MICHIGAN

MōPAR
Evr-Dry
SHIELDING

FOR PLYMOUTH · DODGE · DE SOTO · CHRYSLER CARS · DODGE *"Job-Rated"* TRUCKS

Chassis and Engine Specifications—1947-1948 Cars

MAKE AND MODEL	Wheelbase (In.)	TREAD (In.) Front	TREAD (In.) Rear	OVERALL DIMENSIONS (In.) Length—Inc. Bumpers and Bumper Guards	OVERALL DIMENSIONS (In.) Width	OVERALL DIMENSIONS (In.) Height—Road to Roof—No Load	Shipping Weight (Lb.) Cheapest 5-Pass., 4-Door Sedan or Equivalent	Tire Size (In.)	ENGINE Number of Cylinders, Bore and Stroke (In.)	Taxable Horsepower	Valve Arrangement	Total Piston Displacement (Cu. In.)	Max. Brake Hp. at Specified RPM	Max. Torque at Specified RPM	Standard Compression Ratio (to-1)	Weight per Cu. In.† 5-pass., 4-door Sedan	Weight per Hp.† 5-pass., 4-door Sedan	Hp. per Cu. In.
Buick Special 40	121	58 7/8	61 11/16	207 1/2	77 3/16	66 11/16	3720	6.50/16	8-3 3/16x4 1/8	30.63	I	248.0	110-3600	206-2000	6.30	17.02	38.36	.444
Buick Super 50	124	58 7/8	61 11/16	212 3/8	78 5/8	64 13/16	3910	6.50/16	8-3 3/16x4 1/8	30.63	I	248.0	110-3600	206-2000	6.30	17.78	40.09	.444
Buick Roadmaster 70	129	59 1/8	62 5/16	217 1/8	78 5/8	65 5/16	4190	7.00/15	8-3 7/16x4 5/16	37.81	I	320.2	144-3600	133-3300	6.60	14.65	32.56	.450
Cadillac 61	126	59	63	214 1/8	80 7/8	68 1/2	4165	7.00/15	8-3 1/2x4 1/2	39.20	L	346.0	150-3600	274-1600	7.25	13.48	31.10	.434
Cadillac 62	129	59	63	219 3/16	80 3/4	66 11/16	4235	7.00/15	8-3 1/2x4 1/2	39.20	L	346.0	150-3600	274-1600	7.25	13.68	31.57	.434
Cadillac 60S	133	59	63	223 7/16	80 3/4	66 11/16	4370	7.00/15	8-3 1/2x4 1/2	39.20	L	346.0	150-3600	274-1600	7.25	14.08	32.46	.434
Cadillac 75	136	58 1/2	62 1/2	225 11/16	82 5/16	72	4875	7.50/16	8-3 1/2x4 1/2	39.20	L	346.0	150-3600	274-1600	7.25	15.53	35.83	.434
Chevrolet EJ-EK	116	57 5/8	60	197 3/4	72 3/4	69 5/8	3130	6.00/16	6-3 1/2x3 3/4	29.40	I	216.5	90-3300	174-1200	6.50	16.77	40.33	.416
Chrysler C-38	121 1/2	57	60 3/32	208 1/4	77 3/4	67 3/8	3523	6.50/15	6-3 7/16x4 1/2	28.36	L	250.6	114-3600	204-1200	6.60	16.05	35.29	.455
Chrysler C-39	127 1/2	57 11/16	61 5/16	214 1/4	77 3/4	68	3972	8.20/15	8-3 1/4x4 7/8	33.80	L	323.5	135-3400	270-1600	6.70	13.82	33.12	.417
Chrysler C-40	145 1/2	57 11/16	61 7/8	234 3/4	77 3/4	68 3/4	4865	8.90/15	8-3 1/4x4 7/8	33.80	L	323.5	135-3400	270-1600	6.70	16.58	39.74	.417
Crosley	80	40	40	145	49	57	1115	4.50/12	4-2 1/2x2 1/4	10.00	I	44.0	26.5-5200	33.5-3000	7.50	36.70	60.94	.602
De Soto S-11	121 1/2	57	60 3/32	207 1/4	75 5/8	67 3/8	3428	6.50/15	6-3 7/16x4 1/4	28.36	L	236.6	109-3600	192-1200	6.60	16.60	36.03	.461
Dodge D-24	119 1/2	57	60 3/32	204 1/2	75 3/4	67 5/8	3256	6.00/16	6-3 1/4x4 5/8	25.35	L	230.2	102-3600	184-1200	6.70	16.32	36.82	.443
Ford 87HA	114	58	60	198 3/16	73 1/4	66 7/32	3213	6.00/16	6-3.30x4.40	26.13	L	226.0	90-3300	180-1200	6.70	15.73	41.25	.398
Ford 89A	114	58	60	198 3/16	73 1/4	66 7/32	3248	6.00/16	8-3.18x3.75	32.50	L	239.4	100-3800	180-2000	6.75	15.65	37.46	.418
Frazer F-47	123 1/2	58	60	203	72 7/8	64 1/2	3375	6.50/15	6-3 3/16x4 3/8	26.30	L	226.2	100-3600	180-1400	7.30	17.15	38.75	.442
Hudson 6, 481-482	123 7/8	58 1/2	55 1/2	207 1/2	77 1/16	60 1/4	.....	7.10/15	6-3 3/16x4 3/8	30.40	L	262.0	121-4000	.....	6.50	.....	.....	.482
Hudson 8, 483-484	123 7/8	58 1/2	55 1/2	207 1/2	77 1/16	60 1/4	.....	7.10/15	8-3x4 1/2	28.80	L	254.0	128-4200	.....	6.50	.....	.....	.504
Kaiser K-100	123 1/2	58	60	203	72 7/8	64 1/2	3302	6.50/15	6-3 3/16x4 3/8	26.30	L	226.2	100-3600	180-1400	7.30	16.81	38.02	.442
Lincoln 876H	125	59	60 11/16	218 1/16	77 11/16	67 1/8	4015	7.00/15	12-2 7/8x3 3/4	39.60	L	292.0	125-3600	214-2000	7.20	15.46	37.62	.428
Mercury 89M	118	58	60	201 13/32	73 1/2	69 1/16	3298	6.50/15	8-3 3/16x3 3/4	32.50	L	239.4	100-3800	180-2000	6.75	15.86	37.98	.418
Nash 4840	112	56 11/16	59 3/4	199 3/16	75 1/4	68 1/4	2826	6.00/16	6-3 1/8x3 3/4	23.44	L	172.6	82-3800	138-1600	7.00	19.27	40.56	.475
Nash 4860	121	57 1/2	60 1/2	208 3/16	75 3/8	69 1/4	3412	6.50/15	6-3 3/8x4 3/8	27.34	L	234.8	112-3400	208-1600	7.02	16.66	34.92	.477
Oldsmobile 66	119	58	61 1/2	204	75 5/16	67 5/8	3356	6.00/16	6-3 1/2x4 1/8	29.40	L	238.1	100-3400	190-1200	6.50	16.19	38.58	.420
Oldsmobile 76	125	58	61 1/2	213	76	65 1/8	3523	6.50/16	6-3 1/2x4 1/8	29.40	L	238.1	100-3400	190-1200	6.50	16.90	40.23	.420
Oldsmobile 68	119	58	61 1/2	204	75 5/16	67 5/8	3486	6.50/15	8-3 1/4x3 7/8	33.80	L	257.1	110-3600	210-2000	6.50	15.50	36.24	.428
Oldsmobile 78	125	58	61 1/2	213	76	65 1/8	3638	6.50/16	8-3 1/4x3 7/8	33.80	L	257.1	110-3600	210-2000	6.50	16.09	37.62	.428
Oldsmobile 98	127	58	61 1/2	216	77 5/16	64 5/16	3793	7.00/15	8-3 1/4x3 7/8	33.80	L	257.1	110-3600	210-2000	6.50	16.70	39.03	.428
Packard 8-2201, 2211	120	59 11/32	60 11/32	204 5/8	77 11/32	64 1/32	3820	6.50/16	8-3 1/8x3 3/4	39.20	L	288.0	130-3600	226-2000	7.00	15.00	33.23	.451
Packard Sup. 8—2202, 2232	120	59 11/32	60 11/32	204 5/8	77 11/32	64 1/32	3880	7.00/15	8-3 1/2x4 1/2	39.20	L	327.0	145-3600	266-2000	7.00	13.39	30.21	.443
Packard Cus. 8—2206, 2233	127	60 3/32	60 17/64	212 5/8	77 11/32	64 3/32	4210	7.00/15	8-3 1/2x4 5/8	39.20	L	356.0	160-3600	282-2000	7.00	13.23	29.44	.449
Plymouth P-15	117	57	60 1/8	196 3/4	73 5/8	.....	3082	6.00/16	6-3 1/4x4 3/8	25.35	L	217.8	95-3600	172-1200	6.60	14.15	37.70	.436
Pontiac 6-25	119	58	61 1/2	204 1/2	75 3/4	66	3330	6.00/16	6-3 3/16x4	30.40	L	239.2	93.5-3400	186-1400	6.50	16.01	40.96	.391
Pontiac 6-26	122	58	61 1/2	210 1/4	76 3/4	65 1/4	3460	6.50/16	6-3 3/16x4	30.40	L	239.2	93.5-3400	186-1400	6.50	16.55	42.35	.391
Pontiac 8-27	119	58	61 1/2	204 1/2	75 3/4	66	3415	6.00/16	8-3 1/4x3 3/4	33.80	L	248.9	107.5-3400	192-2100	6.50	15.72	36.42	.432
Pontiac 8-28	122	58	61 1/2	210 1/4	76 3/4	65 1/4	3520	6.50/16	8-3 1/4x3 3/4	33.80	L	248.9	107.5-3400	192-2100	6.50	16.15	37.40	.432
Studebaker 7G	.....	56 1/4	54	192 3/4	69 3/4	60 3/4	2735	5.50/15	6-3x4	21.60	L	169.6	80-4000	134-2000	6.50	19.07	40.44	.472
Studebaker 15A	(a)	55	54	(b)	69 3/4	61 1/4	3265	6.50/15	6-3 3/16x4 3/8	26.30	L	226.2	94-3600	176-1600	6.50	16.64	40.05	.416
Willys 663	104	55 1/2	57	176 1/2	68 11/16	72 11/16(c)	2845	6.00/15	6-3x3 1/2	21.60	L	148.5	72-4000	117-1600	6.42	22.52	46.46	.485

ABBREVIATIONS
I—In-head.
L—L-head.

(a)—119" and 123".
(b)—204 3/8 and 208 3/8.
(c)—With maximum load.

†—All weights are shipping weights plus 500 lb. for passengers and fluids.

Readers Clearing House . . . (*Continued from page* 80)

manifold and heat riser from 1947 Buick 50 Series. Then I installed new timing chain and checked the timing with dial indicator. Installed new condenser and coil, rechecked valves and springs. I have 120 lbs. per cylinder, very even compression, nothing is tight, nothing dragging, no friction.—Thomas J. Mason, Elizabeth, N. J.

ON the trouble you are experiencing with a Series 50 Buick, I wonder if you are expecting too much performance in the lower gears. You say the performance in third speed is satisfactory. This car should do approximately 80-85 miles per hour in third gear and should have good acceleration in third gear from 10 miles per hour on up. I do not think you will get very high speeds in first or second gear with this car, such as you can obtain for instance with a Ford. The reason for this is, of course, that your speed ratios and your transmissions are much different. In your letter you are not clear whether you are speaking only of speed or whether you are speaking of power. If the car jumps ahead in either first or second without material high speed in those gears but does have good high speed in third, I don't think you have anything to complain of.

From the way you have described the work that has been performed on the car it would seem that everything is satisfactory.

In the engine you have replaced or rechecked all points that would affect the performance. The only

(*Continued on page* 84)

a new Ferret Set by Snap-on

A new design... strong... adaptable... they squeeze into close places easily

(All units 3/8" Square Drive)
1/4" and 5/16" Single Broached Sockets
11—Double Broached Sockets from 3/8" to 7/8"
1—Speeder Wrench
1—8" Ratchet
1—Sliding Tee
1—Nut Spinner
1—Universal Joint
3", 6", and 12" Extensions
—Complete in a metal box, 19½" x 5¾" x 1⅜" — specially designed for this set. Rich red enamel finish.

Yes, a new Ferret set . . . new in design . . . way over par in performance — and they're twice as strong as you would expect such slim, slender handles and thin-walled sockets to be.

They squeeze into tight places and get those hard-to-reach nuts and bolts that defy the ordinary type wrench. Newly designed by Snap-on engineers, they make quick easy work of many of the tough jobs on modern motors and engines.

Be sure to ask your "Snap-on" man to show this set the next time he calls.

SNAP-ON TOOLS CORPORATION
8036-A 28th Avenue • Kenosha, Wisconsin
INTERNATIONAL DIVISION: KENOSHA, WISCONSIN, U. S. A.

Valves and Valve Timing Specifications—1947-48 Cars

MAKE AND MODEL	Make	Material		Head Diameter		Seat			Stem Diameter		Valve Lift		Valve Tappet Clearance (Inches)				Valve Timing (Degrees)			
							Angle						Intake		Exhaust		Intake		Exhaust	
		Intake	Exhaust	Intake	Exhaust	Insert Used—Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Operating	Timing	Operating	Timing	Open	Closed	Open	Closed
Buick Special 40	T-R	3140	2112	1.531	1.406	N	45	45	.372	.371	.348	.342	.015H	.015	.015H	.015	13BT	68AB	55BB	22AT
Buick Super 50	T-R	3140	2112	1.531	1.406	N	45	45	.372	.371	.348	.342	.015H	.015	.015H	.015	13BT	68AB	55BB	22AT
Buick Roadmaster 70	T-R	3140	2112	1.781	1.437	N	45	45	.372	.371	.347	.348	.015H	.015	.015H	.015	14BT	71AB	56BB	25AT
Cadillac 61	RM	3140	(a)	1.886	1.636	N	45	45	.342	.341	.335	.345	HA	HA	HA	HA	TC	42AB	52BB	10AT
Cadillac 62	RM	3140	(a)	1.886	1.636	N	45	45	.342	.341	.335	.345	HA	HA	HA	HA	TC	42AB	52BB	10AT
Cadillac 60S	RM	3140	(a)	1.886	1.636	N	45	45	.342	.341	.335	.345	HA	HA	HA	HA	TC	42AB	52BB	10AT
Cadillac 75	RM	3140	(a)	1.886	1.636	N	45	45	.342	.341	.335	.345	HA	HA	HA	HA	TC	42AB	52BB	10AT
Chevrolet EJ-EK	Own	ES	ES	1.640	1.468	N	30	30	.341	.340	.294	.312	.006H	.006H	.013H	.013H	3BT	35AB	46BB	5AT
Chrysler C-38	.....	VA	Sil	1.718	1.531	Y	45	45	.341	.339	.375	.375	.008H	.014	.010H	.014	12BT	44AB	50BB	6AT
Chrysler C-39	.....	VA	Sil	1.531	1.343	Y	45	45	.340	.340	.375	.375	.008H	.011	.010H	.014	12BT	44AB	50BB	6AT
Chrysler C-40	.....	VA	Sil	1.531	1.343	Y	45	45	.340	.340	.375	.375	.008H	.011	.010H	.014	12BT	44AB	50BB	6AT
Crosley	Own	3140	2112	1.171	1.046	N	45	45	.312	.312	.238	.238	.007C	.004	.007C	.006	5BT	50AB	50BB	5AT
De Soto S-11	.....	VA	Sil	1.718	1.531	Y	45	45	.341	.339	.375	.375	.008H	.014	.010H	.014	12BT	44AB	50BB	6AT
Dodge D-24	.....	VA	Sil	1.531	1.406	Y	45	45	.340	.340	.375	.375	.008H	.014	.010H	.014	12BT	44AB	50BB	6AT
Ford 87HA	RM	Sil	NC	1.647	1.510	Y	45	45	.311	.311	.307	.292	.014	.015	.014	.015	5BT	49AB	48BB	6AT
Ford 89A	Own	AS	AS	1.507	1.507	Y	45	45	.311	.310	.292	.292	.011C	.015	.015C	.015	TC	44AB	48BB	6AT
Frazer F-47	.....	9942	Sil	1.515	1.328	N	30	45	.341	.339	.348	.331	.010C	.010	.014C	.014	10BT	60AB	55BB	10AT
Hudson 6, 481-482	RM	8645	2112	1.831	1.556	N	45	45	.341	.340	.346	.346	.010H	.....	.012H	.....	.....	.....	.....	.....
Hudson 8, 483-484	RM	8645	Sil	1.500	1.375	N	45	45	.341	.339	.343	.343	.006H	.....	.008H	.....	10⅔BT	60AB	50BB	18⅔AT
Kaiser K-100	.....	9442	Sil	1.515	1.328	N	30	45	.341	.339	.348	.331	.010C	.010	.014C	.014	10BT	60AB	55BB	10AT
Lincoln 876H	RM	Sil	NC	1.510	1.510	Y	45	45	.311	.311	.292	.292	HA	HA	HA	HA	10⅔BT	36AB	51BB	8AT
Mercury 89M	Own	AS	AS	1.507	1.507	Y	45	45	.311	.310	.292	.292	.011C	.015	.015C	.015	TC	44AB	48BB	6AT
Nash 4840	.....	AS	AS	1.468	1.281	N	44	44	.341	.341	.312	.312	.015	.019	.015	.019	6BT	50AB	46BB	10AT
Nash 4860	.....	.....	.....	1.750	1.468	N	44	44	.372	.372	.343	.343	.015	.022	.018	.022	4½BT	61½AB	49½BB	16½AT
Oldsmobile 66	Var	AS	AS	1.562	1.421	N	30	45	.342	.341	.310	.308	.008H	.012	.011H	.015	5BT	45AB	45BB	5AT
Oldsmobile 76	Var	AS	AS	1.562	1.421	N	30	45	.342	.341	.310	.308	.008H	.012	.011H	.015	5BT	45AB	45BB	5AT
Oldsmobile 68	Var	AS	AS	1.562	1.421	N	30	45	.342	.341	.293	.324	.008H	.012	.011H	.015	TC	35AB	45BB	10AT
Oldsmobile 78	Var	AS	AS	1.562	1.421	N	30	45	.342	.341	.293	.324	.008H	.012	.011H	.015	TC	35AB	45BB	10AT
Oldsmobile 98	Var	AS	AS	1.562	1.421	N	30	45	.342	.341	.293	.324	.008H	.012	.011H	.015	TC	35AB	45BB	10AT
Packard 8-2201, 2211	.....	CN	Aus	1.671	1.437	....	30	45	.341	.340	.342	.342	.007H	.012	.010H	.015	10BT	50AB	50BB	5AT
Packard Sup. 8—2202, 2232	.....	CN	Aus	1.671	1.437	....	30	45	.341	.340	.342	.342	.007H	.012	.010H	.015	10BT	50AB	50BB	5AT
Packard Cus. 8—2206, 2233	.....	CN	Aus	1.671	1.437	....	30	45	.341	.340	.342	.342	HA	.....	.010H	.....	4BT	51AB	49BB	10AT
Plymouth P-15	.....	VA	Sil	1.531	1.406	Y	45	45	.340	.340	.375	.375	.008H	.014	.010H	.014	12BT	44AB	50BB	6AT
Pontiac 6-25	Var	VA	VA	1.593	1.468	N	30	45	.312	.312	.296	.296	.012H	.012	.012H	.012	5BT	39AB	45BB	5AT
Pontiac 6-26	Var	VA	VA	1.593	1.468	N	30	45	.312	.312	.296	.296	.012H	.012	.012H	.012	5BT	39AB	45BB	5AT
Pontiac 8-27	Var	VA	VA	1.468	1.343	N	30	45	.312	.312	.296	.296	.012H	.012	.012H	.012	5BT	39AB	45BB	5AT
Pontiac 8-28	Var	VA	VA	1.468	1.343	N	30	45	.312	.312	.296	.296	.012H	.012	.012H	.012	5BT	39AB	45BB	5AT
Studebaker 7G	RM	CN	2112	1.343	1.281	N	45	45	.312	.312	.312	.312	.016C	.020	.016C	.020	15BT	49AB	54BB	10AT
Studebaker 15A	RM	CN	Sil	1.468	1.281	N	45	45	.343	.343	.343	.343	.016C	.020	.016C	.020	15BT	49AB	54BB	10AT
Willys 663	.....	.....	.....	1.375	1.281	....	45	45	.341	.340	.290	.306	.014	.....	.014	.....	.....	.....	.....	.....

ABBREVIATIONS

AB—After Bottom Center.
AS—Alloy Steel.
AT—After Top Center.
(a)—Stem, .8730; Head, N82120 Steel.
Aus—Austenitic Steel.
BB—Before Bottom Center.
BT—Before Top Center.
C—Cold.
CN—Chrome Nickel.
ES—Extruded Steel.
H—Hot.
HA—Hydraulic Automatic Adjustment.
N—No or None.
NC—Nickel Chrome Alloy.
RM—Rich Mfg. Co.
Sil—Silchrome.
TC—Top Center.
T-R—Thompson Products or Rich Mfg. Co.
VA—Various Alloy Steels.
Var—Various.

Readers Clearing House . . . (*Continued from page* 82)

thing I can see to do would be to recheck it.

You might check to be sure that the clutch is not slipping.

1936 Ford Overheats When Driven Over 40 MPH

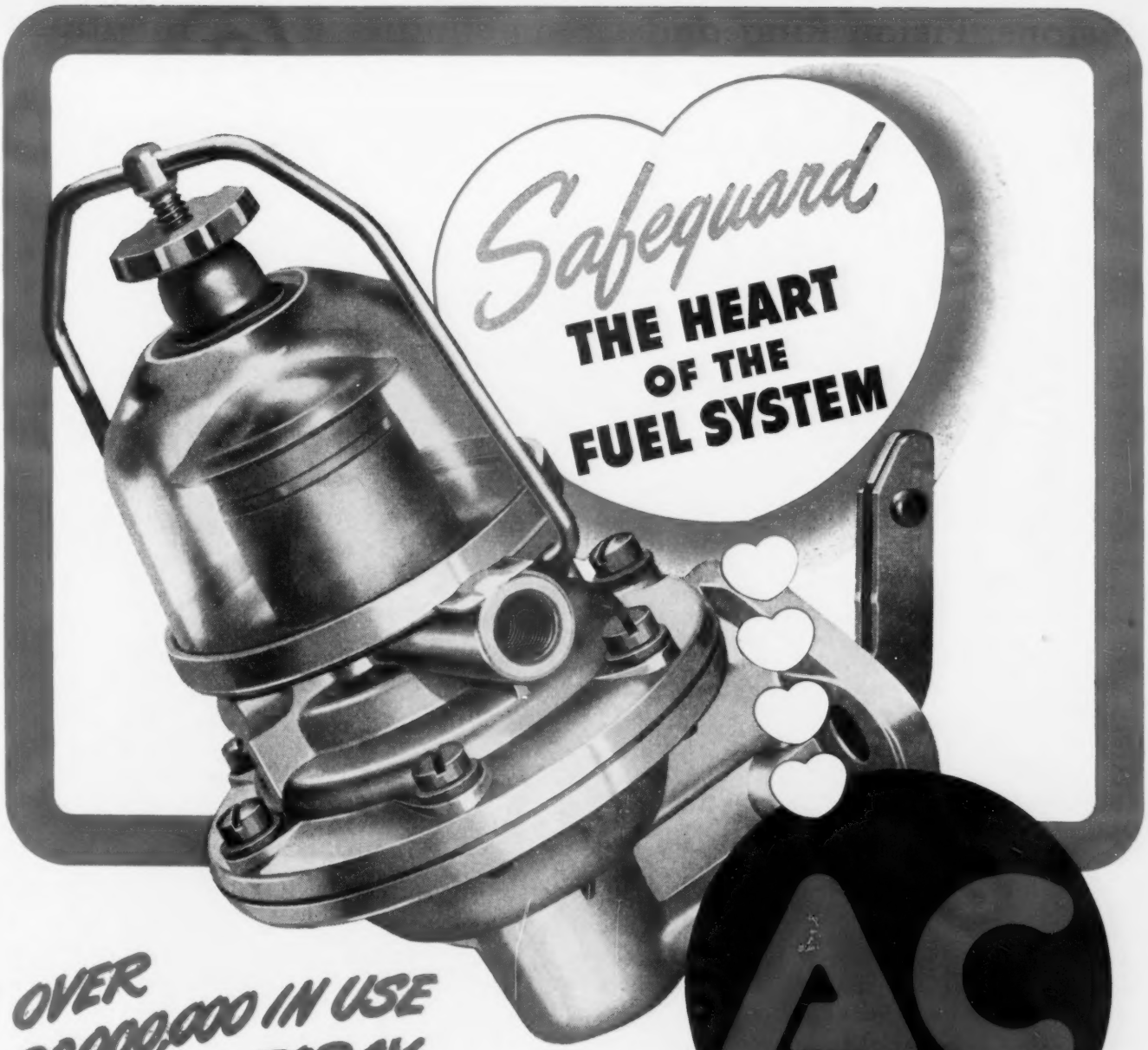
We have a 1936 V-8 Ford Sedan. We reconditioned the motor about 13,000 miles back. We rebored the block, turned the shaft, installed timing gears, valve guides, springs and a new carburetor. Distributor was checked. The car ran fine for about three or four thousand miles and began to heat at about 40 mph, and higher speed. We had the radiator cleaned by a radiator company but that didn't help so we removed both cylinder heads, cleaned and washed the block, took the lower hose off to drain block. This also did not help.

We checked water pumps. They both look O.K. The car has good pick-up and particularly good speed.

Also checked the gaskets by filling system full of water and then turned motor by starter. There was no indication of compression leaks. All hoses are O.K.—George Cooke, Box 48, Custer Point, Texas.

ON THE overheating trouble you are experiencing with the 1936 Ford it is possible that the did not do a thorough job, though this is unusual on a tubular type radiator. It would probably be worthwhile to remove the radiator

(*Continued on page* 86)



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☐ How to Service Oil Filters ☐ How to Service Speedometers
☐ How to Service Ammeters and other Instruments **MA-1**

NAME_____
FIRM_____
STREET ADDRESS_____
CITY_____ STATE_____

Pistons, Piston Ring and Connecting Rod Specifications
1947-48 Passenger Car Models

MAKE AND MODEL	Number of Cylinders, Bore and Stroke (In.)	PISTON						PISTON RINGS						WRIST PIN			CONNECTING RODS	
						Ring Groove Depth (In.)		Oil			Compression							
		Make	Material	Features	Weight (Oz.)	Oil	Compression	Number Used	Width (In.)	Average Gap (In.)	Number Used	Width (In.)	Average Gap (In.)	Length (In.)	Diameter (In.)	Locked In—	Length (In.)—Center-to-Center	Weight (Oz.)
Buick Special 40	8-3 5/32x4 1/8	A-B	Aa	C, Tt, Trs	13.78	.166	.166	2	.1875	.015	2	.0937	.015	2.687	.8125	R	7.625	28.46
Buick Super 50	8-3 5/32x4 1/8	A-B	Aa	C, Tt, Trs	13.78	.166	.166	2	.1875	.015	2	.0937	.015	2.687	.8125	R	7.625	28.46
Buick Roadmaster 70	8-3 7/16x4 5/8	A-B	Aa	C, Tt, Trs	17.94	.182	.182	2	.1875	.015	2	.0937	.015	3.062	.8750	R	8.250	35.58
Cadillac 61	8-3 1/2x4 1/2	A-B	Aa	Trs, An	19.01	.168	.168	1	.1875	.015	2	.0781	.015	3.062	.8750	F	8.750	33.00
Cadillac 62	8-3 1/2x4 1/2	A-B	Aa	Trs, An	19.01	.168	.168	1	.1875	.015	2	.0781	.015	3.062	.8750	F	8.750	33.00
Cadillac 60S	8-3 1/2x4 1/2	A-B	Aa	Trs, An	19.01	.168	.168	1	.1875	.015	2	.0781	.015	3.062	.8750	F	8.750	33.00
Cadillac 75	8-3 1/2x4 1/2	A-B	Aa	Trs, An	19.01	.168	.168	1	.1875	.015	2	.0781	.015	3.062	.8750	F	8.750	33.00
Chevrolet EJ-EK	6-3 1/2x3 3/4	Own	CI	Fh, O, Ss	25.28	.176	.157	1	.1862	.010	2	.1237	.010	3.150	.8647	R	6.812	31.00
Chrysler C-38	6-3 7/16x4 1/2	.....	Aa	C, Us	18.50	.178	.176	2	.1562	.011	2	.0937	.011	2.875	.8593	F	7.875	32.40
Chrysler C-39	8-3 1/4x4 7/8	.....	Aa	C, Us	16.50	.172	.169	2	.1562	.011	2	.0937	.011	2.750	.8593	F	9.000	.....
Chrysler C-40	8-3 1/4x4 7/8	.....	Aa	C, Us	16.50	.172	.169	2	.1562	.011	2	.0937	.011	2.750	.8593	F	9.000	.....
Crosley	4-2 1/2x2 1/4	Own	Aa	O, Of	4.92	.131	.131	1	.0932	.011	2	.0622	.012	2.260	.6251	F	4.125	9.62
De Soto S-11	6-3 7/16x4 1/4	.....	Aa	C, Us	18.50	.178	.176	2	.1562	.011	2	.0937	.011	2.875	.8593	F	8.000	34.10
Dodge D-24	6-3 1/4x4 5/8	.....	Aa	C, Us	16.00	.172	.169	2	.1562	.011	2	.0937	.011	2.750	.8593	F	7.812	.....
Ford 87HA	6-3.30x4.40	Stl	Aa	Ss, O, To	14.60	.191	.164	2	.1862	.013	2	.0922	.013	2.917	.8502	F	7.798	25.81
Ford 89A	8-3.18x3.75	Stl	Aa	Ss, O, Tp	13.00	.165	.165	2	.1547	.014	2	.0917	.014	2.550	.7502	F	7.000	17.35
Frazer F-47	6-3 9/16x4 3/8	.....	Aa	Ss, O, Tp	15.70	.179	.178	2	.1547	.012	2	.0930	.012	2.812	.8593	F	7.000	29.60
Hudson 6, 481-482	6-3 9/16x4 3/8	Own	Aa	C	18.00	.195	.195	2	(a)	.010	2	.0780	.010	2.937	.9687	F	8.125	34.24
Hudson 8, 483-484	8-3x4 1/2	Own	Aa	C	10.25	.148	.148	2	(a)	.006	2	.0937	.006	2.437	.7500	F	8.1875	31.36
Kaiser K-100	6-3 9/16x4 3/8	.....	Aa	Ss, O, Tp	15.70	.179	.178	2	.1547	.012	2	.0930	.012	2.812	.8593	F	7.000	29.60
Lincoln 876H	12-2 7/8x3 3/4	Own	CS	Sak	13.40	.164	(g)	1	.1863	.013	2	.0933	.011	2.607	.7503	F	7.400	25.08
Mercury 89M	8-3 9/16x3 3/4	Stl	Aa	Ss, O, Tp	13.00	.165	.165	2	.1547	.014	2	.0917	.014	2.550	.7502	F	7.000	17.35
Nash 4840	6-3 1/8x3 3/4	Own	Aa	Ss, O, To	.....	.174	(b)	1	.1862	.015	2	.0932	.015	2.632	.8125	F	6.750	24.00
Nash 4860	6-3 5/8x4 5/8	Own	Aa	Ss, O, Tp	.....	.177	(c)	2	.1547	.015	2	.0932	.015	2.824	.8746	F	8.750	36.25
Oldsmobile 66	6-3 1/2x4 1/8	Own	Aa	Ts, C	18.50	.171	.187	2	.1875	.011	2	.0937	.013	3.156	.8593	P	7.812	29.00
Oldsmobile 76	6-3 1/2x4 1/8	Own	Aa	Ts, C	18.50	.171	.187	2	.1875	.011	2	.0937	.013	3.156	.8593	P	7.812	29.00
Oldsmobile 68	8-3 1/4x3 7/8	Own	Aa	Ts, C	16.00	.171	.156	2	.1875	.011	2	.0937	.011	2.968	.8593	P	7.812	28.00
Oldsmobile 78	8-3 1/4x3 7/8	Own	Aa	Ts, C	16.00	.171	.156	2	.1875	.011	2	.0937	.011	2.968	.8593	P	7.812	28.00
Oldsmobile 98	8-3 1/4x3 7/8	Own	Aa	Ts, C	16.00	.171	.156	2	.1875	.011	2	.0937	.011	2.968	.8593	P	7.812	28.00
Packard 8—2201, 2211	8-3 1/2x3 3/4	.....	Aa	At	19.50	.....	.....	1	.1862	.011	2	(d)	.012	3.015	.8750	F	7.937	35.70
Packard Sup. 8—2202, 2232	8-3 1/2x4 1/2	.....	Aa	At	19.50	.....	.....	1	.1862	.011	2	(d)	.012	3.015	.8750	F	7.687	35.40
Packard Cus. 8—2206, 2233	8-3 1/2x4 5/8	.....	Aa	At	19.50	.....	.....	1	.1862	.011	2	(d)	.012	3.015	.8750	F	9.250	38.90
Plymouth P-15	6-3 1/4x4 3/8	.....	Aa	Us, C	16.00	.172	.169	2	.1562	.011	2	.0937	.011	2.750	.8593	F	7.937	.....
Pontiac 6-25	6-3 9/16x4	Own	CN	.....	27.10	.194	.192	1	.1875	.012	2	.0937	.010	3.063	.9375	P	7.562	37.00
Pontiac 6-26	6-3 9/16x4	Own	CN	.....	27.10	.194	.192	1	.1875	.012	2	.0937	.010	3.062	.9375	P	7.562	37.00
Pontiac 8-27	8-3 1/4x3 3/4	Own	CN	.....	24.70	.189	.169	1	.1875	.010	2	.0937	.012	2.875	.9375	P	7.562	31.70
Pontiac 8-28	8-3 1/4x3 3/4	Own	CN	.....	24.70	.189	.169	1	.1875	.010	2	.0937	.012	2.875	.9375	P	7.562	31.70
Studebaker 7G	6-3x4	A-A	Aa	Ts	8.48	.168	(e)	1	.1562	.012	2	(f)	.012	2.625	.7500	R	6.375	20.48
Studebaker 15A	6-3 9/16x4 3/8	A-A	Aa	Ts	14.40	.185	.170	1	.1875	.012	2	.0937	.012	2.875	.8750	R	8.125	33.30
Willys 663	6-3x3 1/2	.....	Aa	Tp	.....	.....	.....	1	.1875	.....	2	.0937	.....	.....	.7497	R	6.343	.....

ABBREVIATIONS

(a)—Upper ring, .1875; Lower, .156.
(b)—No. 1 ring, .170; No. 2 ring, .154.
(c)—No. 1 ring, .180; No. 2 ring, .157.
(d)—No. 1, .0930 to .0935; No. 2, .1235 to .124.
(e)—Top ring, .163; Middle ring, .148.
(f)—Top, .0937; Middle, .1250.
(g)—.153 and .1645.

A-A—Aluminum Company of America.
Aa—Aluminum alloy.
A-B—Aluminum Company of America and Bohn Aluminum & Brass Corp.
An—Anodized finish.
At—Auto-Thermic.
C—Cam ground.

CI—Cast Iron.
CN—Chrome Nickel Alloy.
F—Floating.
Fh—Flat Head.
O—Oval.
Of—Aluminum Oxide Finish.
P—Locked-in Piston.
R—Locked-in Rod.

Ss—Slipper skirt.
Sak—Solid skirt.
Stl—Sterling Aluminum Products, Inc
Tp—Tin plated.
Trs—Transverse slot.
Ts—"T" Slot.
Tt—Turbolator top.
Us—"U" Slot.

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and remove the lower tank so as to run rods through the tubes to make sure they are open.

I note you have flushed the block; however, there are many cases where rust and scale have built up so much in a block that it is impossible to dissolve it with normal solutions and it becomes necessary to use a dilute solution of hydrochloric acid. If you do this, use one part of acid to five parts of water and be sure it is used in the block only and not in the radiator.

Recheck to make sure that you do not have a leaking gasket for as you know, if you have a leaking head gasket it frequently happens that the hot gasses from the combustion chamber will blow into the water jacket and thus cause extreme heating. You should place a straight edge across the cylinder-heads to make sure they are not warped. Also check the top surface of the cylinder block to make sure it is not warped.

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Smoky exhaust means power-stealing oil pumping, so check the connecting rod engine bearings! Worn engine bearings let excess oil enter combustion chambers. It burns to carbon on spark plugs, valves, pistons and rings. Replace worn bearings with Federal-Mogul Oil-Control bearings for renewed power and economy!
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Current Passenger Car Price, Weight and Body Table

Following are prices at factory for cars with standard equipment as of December 1. State or local taxes, transportation and finance charges and optional equipment are extra.

BODY, MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight
BUICK				
Series 40				
Sedanet, 2d	$1497	$114	$1611	3670
Sedan, 4d	1556	117	1673	3720
Series 50				
Sedanet, 2d	1708	135	1843	3795
Sedan, 4d	1790	139	1929	3910
Convertible Coupe, 2d	2175	158	2333	4050
Estate Wagon	2622	183	2805	4170
Series 70				
Sedanet, 2d	1968	163	2131	4095
Sedan, 4d	2065	167	2232	4190
Convertible Coupe	2463	188	2651	4345
Estate Wagon	3030	219	3249	4445
CADILLAC				
Series 61				
Club Coupe, 2d	2060	140	2200	4060
Touring Sedan, 4d	2175	149	2324	4165
Series 62				
Club Coupe, 2d	2290	156	2446	4145
Convertible Coupe, 2d	2720	182	2902	4455
Touring Sedan, 4d	2360	163	2523	4235
Series 60-Special				
Touring Sedan, 4d	2990	205	3195	4370
Series 75				
Business Sedan, 9p	4095	273	4368	4790
Touring Sedan, 4d	4190	281	4471	4875
Business Imperial, 9p	4275	285	4560	4800
Sedan, 4d., 7p	4400	286	4686	4895
Imperial, 7p	4590	297	4887	4930
CHEVROLET				
Stylemaster-EJ				
Business Coupe, 2d	1080	80	1160	3050
Sport Coupe, 2d	1120	82	1202	3060
Town Sedan, 2d	1135	84	1219	3075
Sport Sedan, 4d	1190	86	1276	3130
Fleetmaster-EK				
Sport Coupe	1195	86	1281	3090
Town Sedan, 2d	1200	86	1286	3125
Sport Sedan, 4d	1255	90	1345	3185
Cabriolet	1525	103	1628	3390
Station Wagon	1775	118	1893	3465
Fleetline-EK				
Aerosedan	1225	88	1313	3125
Sedan	1280	91	1371	3150
CHRYSLER				
Royal-Six				
Coupe, 2d., 3p	1561	87	1648	3373
Sedan, 2d	1626	90	1717	3458
Club Coupe, 2d	1651	91	1742	3443
Sedan, 4d	1661	92	1753	3523
Sedan, 8p	2043	112	2155	3977
Limousine, 8p	2163	119	2282	4022
Windsor-Six				
Coupe, 2d., 3p	1611	89	1700	3383
Sedan, 2d	1691	93	1784	3468
Club Coupe, 2d	1701	94	1795	3448
Sedan, 4d	1711	94	1805	3528
Sedan Traveler	1846	102	1948	3610
Convertible Coupe	1991	109	2100	3693
Sedan, 8p	2093	115	2208	3977
Limousine, 8p	2213	121	2334	4052
Saratoga-Eight				
Coupe, 2d., 3p	1873	103	1976	3817
Sedan, 2d	1948	106	2054	3900
Club Coupe, 2d	1958	107	2065	3930
Sedan, 4d	1973	108	2081	3972
New Yorker-Eight				
Coupe, 2d., 3p	1973	108	2081	3837
Sedan, 2d	2048	112	2160	3932
Sedan, 4d	2073	113	2186	3987
Convertible Coupe	2323	126	2449	4132
Town & Country-8				
Sedan, 4d	2496	136	2632	4300
Convertible Coupe	2873	155	3028	4332
Crown Imperial-8				
Sedan, 8p	3905	207	4112	4885
Limousine, 8p	4005	212	4217	4875
CROSLEY				
Sedan, 2d	888	.....	.....	1115
Convertible	949	.....	.....	1110
DE SOTO				
DeLuxe				
Coupe, 2d., 3p	1451	80	1531	3323
Sedan, 2d	1516	84	1600	3418
Club Coupe	1541	85	1626	3413
Sedan, 4d	1551	86	1637	3448
Custom				
Sedan, 2d	1581	87	1668	3443
Club Coupe, 2d	1591	88	1679	3398
Sedan, 4d	1601	88	1689	3453
Convertible Coupe, 2d	1891	104	1995	3638
Sedan, 8p	1893	109	2092	3837
Limousine, 8p	2103	115	2218	3995
Suburban	2283	125	2408	4012
DODGE				
DeLuxe				
Coupe, 2d., 3p	1347	75	1422	3146
Sedan, 2d	1417	78	1495	3236
Sedan, 4d	1457	81	1538	3256
DODGE (Continued)				
Custom				
Club Coupe	$1502	$83	$1585	3241
Sedan, 4d	1507	83	1590	3281
Town Sedan	1577	87	1664	3331
Convertible Coupe	1812	99	1911	3461
Sedan, 8p	1861	103	1964	3757
FORD				
DeLuxe Six				
Coupe, 2d	1078	76	1154	3033
Tudor	1133	79	1212	3183
Fordor	1188	82	1270	3213
Super DeLuxe Six				
Coupe	1170	81	1251	3033
Tudor	1225	84	1309	3183
Sedan Coupe	1245	85	1330	3133
Fordor	1285	87	1372	3233
DeLuxe Eight				
Coupe	1150	80	1230	3066
Tudor	1205	83	1288	3216
Fordor	1260	86	1346	3246
Super DeLuxe-Eight				
Coupe	1245	85	1330	3066
Tudor	1295	87	1382	3216
Sedan Coupe	1320	89	1409	3166
Fordor	1350	90	1440	3266
Conv. Club Coupe	1635	105	1740	3266
Station Wagon	1855	117	1972	3520
Sportsman	2150	132	2282	3366
FRAZER				
Sedan, 4d	2152	212	2364	3375
Manhattan Sedan	2550	286	2836	3375
HUDSON				
Super Six-171				
Coupe, 2d., 3p	1762	128	1890	.....
Brougham, 2d	1822	131	1953	.....
Club Coupe	1867	133	3000	.....
Sedan, 4d	1870	133	2003	.....
Convertible Brougham	.....	.....	.....	.....
Commodore Six-172				
Club Coupe	1997	140	2137	
Sedan, 4d	2020	141	2161	3540
Super Eight-173				
Club Coupe	1947	142	2089	.....
Sedan, 4d	1950	142	2092	.....
Commodore Eight-174				
Club Coupe	2077	149	2226	.....
Sedan, 4d	2100	150	2250	3600
Convertible Brougham	.....	.....	.....	.....
KAISER				
Sedan, 4d	1967	207	2174	3302
LINCOLN				
Club Coupe	2370	163	2533	3915
Sedan, 4d	2390	164	2554	4015
Club Coupe, Custom	2530	171	2701	3915
Sedan, 4d., Custom	2550	172	2722	4015
Convertible Coupe	2950	193	3143	4245
Continental Coupe	4380	282	4662	4125
Continental Cabriolet	4460	286	4746	4135
MERCURY				
Sedan, 2d	1490	102	1592	3268
Sedan Coupe	1540	105	1645	3218
Town Sedan, 4d	1555	105	1660	3298
Club Convertible	1880	122	2002	3368
Station Wagon	2075	132	2207	3571
NASH				
600 Series				
Bus. Coupe	1298	101	1399	2635
Brougham, 2d	1358	101	1459	2731
Slip. Sedan, 4d	1363	101	1464	2826
Trunk Sedan, 4d	1407	101	1508	2786
Brougham, Cust., 2d	1538	110	1648	2731
Slip. Sedan, Cust., 4d	1543	110	1653	2826
Trunk Sedan, Cus., 4d	1587	110	1697	2786
Ambassador				
Brougham, 2d	1642	121	1763	3312
Slip. Sedan, 4d	1659	120	1779	3412
Trunk Sedan, 4d	1701	120	1821	3387
Slip. Sedan, Cus., 4d	1839	129	1968	3412
Trunk Sedan, Cus., 4d	1881	129	2010	3387
Brougham, Cus., 2d	1883	69	1952	3312
Surb. Sedan, 4d	2097	142	2239	3522
OLDSMOBILE				
Series 66-Six				
Club Coupe	1385	103	1488	3316
Club Sedan, 2d	1410	103	1513	3323
Sedan, 4d	1450	106	1556	3356
Convertible Coupe	1725	120	1845	3611
Station Wagon	2305	151	2456	3770
Series 76-Six				
Std. Club Sedan, 2d	1475	109	1584	3495
Std. Sedan, 4d	1545	114	1659	3523
DeLuxe Club Sedan, 2d	1590	115	1705	3515
DeLuxe Sedan, 4d	1655	118	1773	3590
Series 68-Eight				
Club Coupe	1440	106	1546	3446
Club Sedan, 2d	1465	107	1572	3453
Sedan, 4d	1505	109	1614	3486
Convertible Coupe	1780	123	1903	3741
Station Wagon	2360	154	2514	3900
OLDSMOBILE (Continued)				
Series 78-Eight				
Std. Club Sedan, 2d	$1530	$113	$1643	3612
Std. Sedan, 4d	1600	117	1717	3638
DeLuxe Club Sedan, 2d	1645	117	1762	3650
DeLuxe Sedan, 4d	1710	120	1830	3705
Series 98-Eight				
Club Sedan, 2d	1740	125	1865	3714
Sedan, 4d	1790	127	1917	3793
Convertible Coupe	2160	147	2307	4049
PACKARD—1948				
Eight-2201				
Club Sedan	1998	127	2125	3750
Touring Sedan	2022	128	2150	3820
Station Sedan	3161	189	3350	4080
DeLuxe Eight-2211				
Club Sedan	2212	138	2350	3770
Touring Dedan	2235	140	2375	3850
Super Eight-2202				
Club Sedan	2505	160	2665	3810
Touring Sedan	2529	161	2690	3880
Conv. Victoria Coupe	2990	185	3175	4025
Super Eight-2222				
Touring Sedan, 7p	3109	191	3300	.....
Limousine, 7p	3252	198	3450	.....
Sedan, DeLuxe, 7p	3442	208	3650	.....
Limousine, DeLuxe, 7p	3584	216	3800	.....
Custom Eight-2206				
Club Sedan	3413	212	3625	4140
Touring Sedan	3461	214	3675	4210
Conv. Victoria Coupe	3860	235	4095	4380
Custom Eight-2226				
Touring Sedan, 7p	4250	254	4504	.....
Limousine, 7p	4406	262	4668	.....
PLYMOUTH				
DeLuxe				
Coupe, 3p	1139	66	1205	2977
Sedan, 2d	1164	68	1232	3047
Club Coupe	1189	69	1258	3037
Sedan, 4d	1214	70	1284	3082
Special DeLuxe				
Coupe, 3p	1209	69	1278	2982
Sedan, 2d	1239	71	1310	3062
Club Coupe	1264	72	1336	3057
Sedan, 4d	1289	74	1363	3107
Convertible Coupe	1565	89	1654	3282
Suburban	1669	94	1763	3402
PONTIAC				
Torpedo Six				
Business Coupe	1287	100	1387	
Sport Coupe	1336	102	1438	3300
Sedan, 2d	1350	103	1453	3305
Sedan Coupe	1380	104	1484	3305
Sedan, 4d	1406	106	1512	3330
Conv. Sedan Coupe	1690	121	1811	3570
Conv. Sedan Coupe, DeLuxe	1730	123	1853	.....
Streamliner Six				
Sedan Coupe	1439	108	1547	3405
Sedan, 4d	1487	111	1598	3460
Station Wagon, Std	2092	143	2235	.....
Station Wagon, DeL	2166	146	2312	3725
Torpedo Eight				
Business Coupe	1332	102	1434	
Sport Coupe	1381	104	1485	3365
Sedan, 2d	1395	105	1500	3375
Sedan Coupe	1425	106	1531	3375
Sedan, 4d	1451	108	1559	3415
Conv. Sedan Coupe	1735	123	1858	3645
Conv. Sedan Coupe, DeL	1775	125	1900	.....
Streamliner Eight				
Sedan Coupe	1484	111	1595	3460
Sedan, 4d	1532	113	1645	3520
Station Wagon, Std	2137	145	2282	
Station Wagon, DeLuxe	2211	148	2359	3795
STUDEBAKER—1948				
Champion DeLuxe				
Coupe, 3p	1347	99	1446	2600
Sedan, 2d	1412	102	1514	2685
Coupe, 5p	1437	103	1540	2670
Sedan, 4d	1442	104	1546	2735
Champ. Regal DeLuxe				
Coupe, 3p	1417	102	1519	2620
Sedan, 2d	1482	106	1588	2710
Coupe, 5p	1507	107	1614	2690
Sedan, 4d	1512	107	1619	2760
Convertible	1845	125	1970	2875
Commander-DeLuxe				
Coupe, 3p	1632	119	1751	3140
Sedan, 2d	1697	122	1819	3230
Coupe, 5p	1722	123	1845	3210
Sedan, 4d	1727	124	1851	3265
Comm. Regal DeLuxe				
Coupe, 3p	1747	125	1872	3155
Sedan, 2d	1812	128	1940	3245
Coupe, 5p	1837	129	1966	3225
Sedan, 4d	1842	130	1972	3280
Land Cruiser	2005	138	2143	3340
Convertible	2178	147	2325	3420
WILLYS				
Station Wagon	1495	.....	.....	.....

T·SLOT CAM GRINDING LO·EXPANSION ALLOY

- All pioneered by Alcoa
- Permitting closer fitting pistons . . .
- Close conformity of piston and barrel when hot

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LO·EX *Pistons* of Alcoa Aluminum

Registered Trade Mark

ALCOA ALUMINUM

Third Service Peak . . (*Continued from page* 41)

cial level, the benefits of proper Service. Seemingly, you feel that because you stand to profit, you must do it all, with your own sales efforts, when, as a matter of fact, there are few industries which merit the support of magazines, newspapers, and the radio as much as the automotive industry does. Few industries serve as many people as steadily as you do; few products are as important to the day-to-day life of millions of people as is the automobile; and few products involve the responsibility of one person to all others as does the automobile.

The Automobile Industry has always impressed me as the most aggressive, hardest selling group that I know. But we believe that you overlook the easy way to do it, and we suggest that you think over the fact that you have a very powerful and appealing approach to the automobile owner which you are not now using.

And now is the time for all of you to consider anything which may broaden your market. I would like to have you think of the possibilities of all wholesalers and manufacturers working as a group to supply dealers with a really powerful Promotion, which I am pleased to call a Third Natural Peak of Service.

It is true, that all dealers do their best jobs of selling, with Spring Tune Up and Prepare for Winter. This is because everyone in the industry has united with one appeal, at a time when the automobile owner must come in for some service. Over the years that service job has been greatly broadened and one of the reasons is that the increased power of united Promotion has made it easier for the dealer to sell. Consequently he sells more.

But for 7 long months — which happen to be the months of greatest use of the car — the Industry goes its individual ways with varying appeals. There is no unity in the appeal, nor any of the power which develops from concentration upon a time. The result is that it is all too easy for the automobile owner to procrastinate—to let the job slide—and then, because it is harder for the dealer to sell, he sells less.

You will recall that I said earlier, that your industry has a story which is in the public interest. Here is where that idea came to us. An article on Preventive Service appeared in the July 12th issue of Colliers. A week after it was out the staff interview a lot of Collier's readers all over the country. We went through the issue with them and asked what they had read and how completely they had read it. Among the automobile owners, 64 per cent of the men and 40 per cent of the women had read this article through.

When you realize that Preventive Service is educational and therefore a little tough to read and that the

(*Continued on page* 92)

A NAME TO REMEMBER WHEN YOU THINK OF BETTER LATHES AND SHAPERS

Logan

9-inch swing
18 inches between centers
$159.50 F.O.B. CHICAGO

NEW 9-inch Logan Lathe

Logan performance In a New Size At a New Low Price

In compact 9-inch size this new Logan Lathe combines the speed, accuracy, and all around dependability that have made more than 40,000 larger Logan Lathes outstanding machines in war and post-war production. The spindle turns on ball bearing mountings inherently well adapted to high speed work. The two V-ways and two flat ways of the rugged bed are precision ground to within .0005" of parallelism. Massive construction assures steadiness on heavy cuts. Self lubricating bronze bearings protect vital wear points. The result is a versatile lathe with the traditional Logan sustained accuracy, effective in precision manufacturing, tool room operations, and general machine shop and automotive work. Complete information is available at your Logan dealer's, or on written request.

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LOGAN ENGINEERING CO., CHICAGO 30, ILLINOIS

HANSEN
air service equipment

Good service brings customers back to your station because they like to get clean-cut, efficient service, and get on their way. Hansen equipment has proved to give that kind of service over a long period of years —the kind of service that "brings 'em back".

Hansen Shut-off Coupling (Series 1000) is the most widely used air hose coupling today. Car lifts, air hose, grease guns, spray cleaners, blow guns —are improved with Hansen couplings. Quick-connect and disconnect by sliding a movable sleeve. Complete swivel action. Pipe, hose stem or hose clamp connections.

Hansen Jet Oiler—the most popular oiler in use today because it is most efficient. It projects a solid stream of light or penetrating oil when the plunger is depressed. Design allows easy movement in any direction. For protection against breakage and dirt, all pump parts are enclosed in the handle. One quart capacity.

Hansen Sand Blast Cleaner is a simple, efficient unit for removing carbon from parts, paint and rust from body, parts and fenders, and for any number of similar jobs. Operation is very simple. Tip is hardened steel. Valve can be used as quick detachable blow gun for blowing air only.

Write for Automotive Catalog

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New England States . . . . A. D. Geiger, Belmont, Massachusetts
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Eastern, Southern States . . . . . B-R Engineering Co., Baltimore, Md.
Colorado, New Mexico, Utah, Wyoming: E. C. Wild Co., Denver, Colorado
Southwest Territory . . C. C. Brownfield, Dallas, Texas
Arizona, So. California . . . . . Burklyn Company, Los Angeles, California
Idaho, Oregon, Washington . . . Jack J. Kolberg, Seattle, Washington
Central Western States . . . John Henry Foster Company, St. Louis, Missouri, Minneapolis, Minnesota
Northern Cal., Nevada . . H. E. Linney Company, Oakland, California
Michigan . . William H. Nash Company, Detroit, Michigan
Indiana, Wisconsin . . Neff Engineering Company, Ft. Wayne, Indiana
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THE HANSEN MANUFACTURING COMPANY

4031 WEST 150th STREET • CLEVELAND 11, OHIO

Third Service Peak . . (*Continued from page* 90)

further the reader went, the more it seemed the job would cost him, then this degree of thorough readership is remarkable. It can only mean that the subject was of interest to the automobile owner. That is emphasized by the 40 per cent thorough readership by women. Don't minimize that Woman-interest. If you could ever get women needling the old man to have the car properly serviced, you know it would be done. This test unquestionably proves that in Safety you have a vital theme, particularly when it is presented on a non-commercial basis.

We believe the timing had something to do with it too. 73 per cent of all vacations are taken in the months of July and August, and according to the records of the State of New York, 74.9 per cent of their vacationists traveled by automobile. There is no question therefore that a high percentage of Collier's readers were on the eve of starting out for a long automobile trip, at higher than normal speeds, so our story hit them when they were very vulnerable.

You could use facts like the following to bring home the point. This comes from a survey made by the Iowa State University. Their tests showed that if the life of a tire at 45 miles an hour is considered at 100 per cent then at 35 miles is 154 per cent and that at 65 miles an hour is 51 per cent. This means that tires would wear out three times as fast on a trip taken in July at 65 miles an hour, as they would in March if the car is usually driven at 35 miles an hour.

The importance to you of launching some sort of promotion which will penetrate the consciousness of the automobile owner in July is proved by the per cent of sales for each month of gasoline for the year 1946. It shows that the two peak months of the year are July and August.

We all know that service drops after the spring high. Let's not think that this is the fault of the selling by the dealer. Let's think of getting more power into his sales story—and of improving the timing.

It is our belief that the various units which make up the Automotive Industry should come together at this time, and concentrate on a theme which is distinctly in the service of the Public. Thus, you would merit the support of all channels of publicity and that would enable you to clean up a lot of the business which has gotten away from you in the meantime. This would happen for two reasons:

First, the automobile owner is vulnerable at this time. To concentrate at the time when he is thinking most of driving, would be to take a leaf from the book of the haberdasher, who displays his rainwear when it is raining.

Second, with an industry-wide

(*Continued on page* 96)

Quiet, please!

At sound-proof "listening posts" such as this, Federal inspectors bend an alert ear to the quiet-running qualities of *every* automotive ball bearing that comes off the production line.

After all dimensions and tolerances are checked, *every* bearing is tested for quiet operation on a noiseless motor. Only bearings passing Federal's rigid standards for quietness are given final approval.

So it goes through over 100 individual manufacturing, inspection and cleaning operations—with *every fourth operator an inspector*. For Federal Bearings must be quiet-running and friction-free in their performance. And that means they can't be either too tight or too loose, that the ball track is ground to a chatter-free finish and just the right radius. Bores are cylindrical, not tapered or bell-mouthed and the sides of the rings are parallel to each other and the ball track.

Use Federal Ball Bearings on your tough repair jobs. They're time-savers because they fit right *every time*. And they'll help you win friends and influence customers to come back again when there's another job to be done. That's why Federals are original equipment on so many cars.

Get to know the Federal *complete* ball bearing line by getting to know your NAPA distributor. There's one near you.

THE FEDERAL BEARINGS CO., INC.
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Makers of Fine Ball Bearings

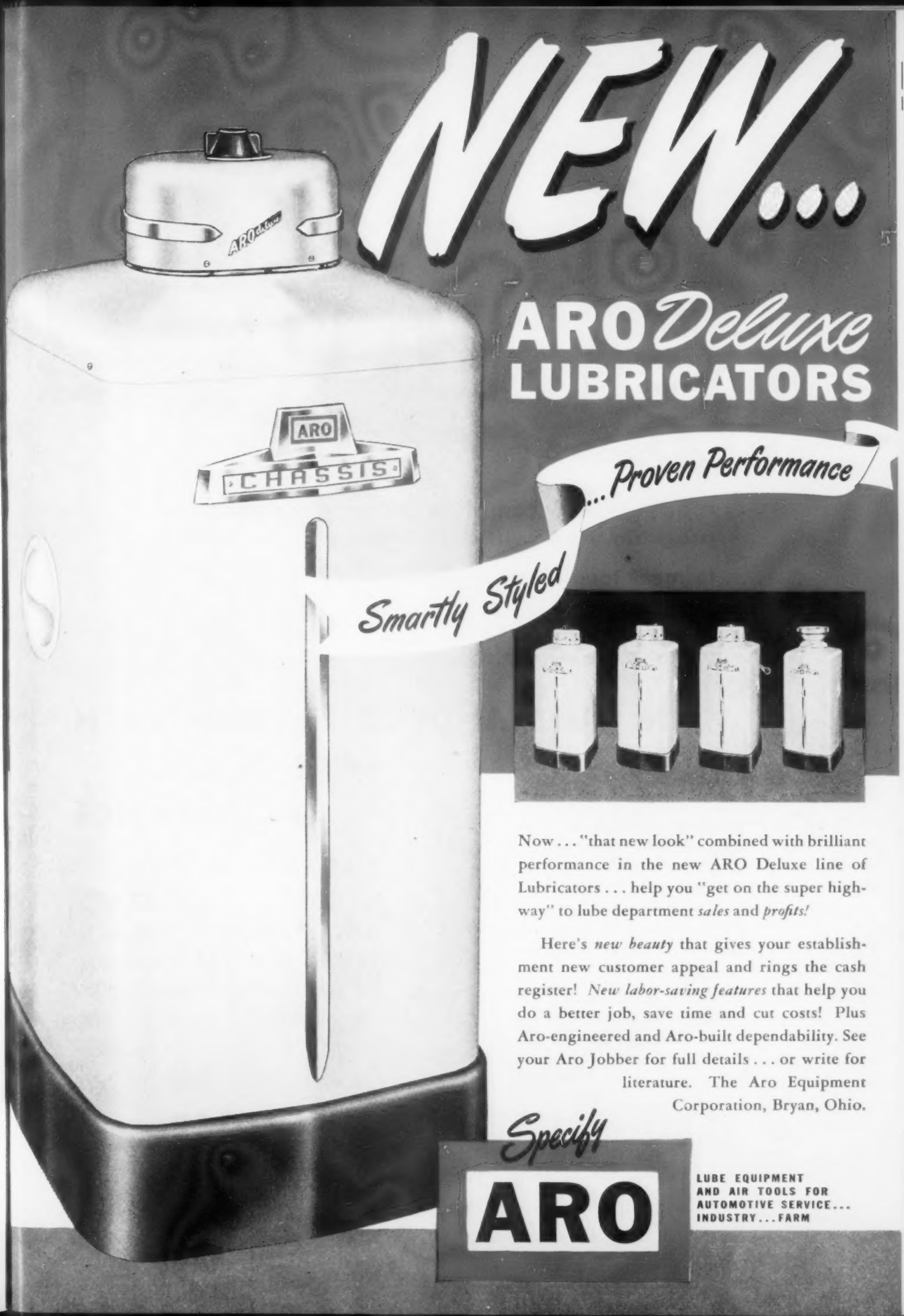
Distributed Nationally Through
39 LOCAL N.A.P.A. WAREHOUSES

FEDERAL BALL BEARINGS

ONE OF AMERICA'S LEADING BALL BEARING MANUFACTURERS

N.A.P.A. Assurance of Quality

Quality since 1908


NEW...
ARO Deluxe
LUBRICATORS
...Proven Performance
Smartly Styled
ARO
CHASSIS
Now . . . "that new look" combined with brilliant performance in the new ARO Deluxe line of Lubricators . . . help you "get on the super highway" to lube department sales and profits!
Here's new beauty that gives your establishment new customer appeal and rings the cash register! New labor-saving features that help you do a better job, save time and cut costs! Plus Aro-engineered and Aro-built dependability. See your Aro Jobber for full details . . . or write for literature. The Aro Equipment Corporation, Bryan, Ohio.
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LUBE EQUIPMENT AND AIR TOOLS FOR AUTOMOTIVE SERVICE... INDUSTRY... FARM

Exide IS READY

. . . ready with a complete battery merchandising program that will bring you all you need . . .

. . . to meet tough competition

. . . to sell dollar-wise prospects

. . . to go forward to a new high in battery profits

1 AN OUTSTANDING BATTERY WITH WIDE PUBLIC ACCEPTANCE

THREE GRADES . . . HYCAP . . . SURE-START AND STARTEX . . . designed to meet all automotive requirements. Priced to meet all pocketbooks.

2 EXIDE SURE-START SERVICE

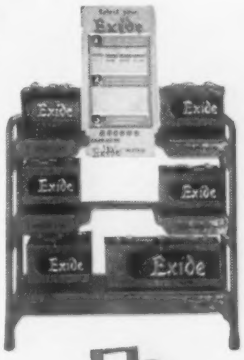
A practical battery service program that will help you sell more recharges, more new Exide Batteries, and more plus-profit items than ever before.

MORE THAN EVER BEFORE IT'S GOOD TO BE AN EXIDE DEALER

3 MONEY-MAKING SELLING AIDS

THE EXIDE MERCHANDISER with KEEPACHARGE

Two sizes, both with Exide Keepacharge. "DeLuxe" displays and maintains 9 batteries; "Standard" displays and maintains 6 batteries.



THE EXIDE SERVICE KIT

More than a water servicer—more than a convenient tool carrier. A selling-aid that opens the way to profits through Exide Sure-Start Service.

4 BATTERY SERVICE EQUIPMENT THAT *SELLS*...

(a) Exide FAST CHARGER-TESTER

A thermostatically-controlled fast charger, slow charger, and accurate battery tester in one compact unit. It will bring you more battery sales . . . more satisfied customers . . . more "plus" profits.

(b) Exide STANDARD CHARGER

A high quality, low cost, standard charger for "slow" charging. Available in three popular sizes: for 24-hour charging of 6, 12 and 24 batteries.

5 LABOR-SAVING SERVICE TOOLS

A set of 10 carefully selected and tested items for your Exide Service Kit. Will help to make battery work simple and easy.

6 POWERFUL ADVERTISING

LEADING MAGAZINES . . . THE SATURDAY EVENING POST, LIFE, TIME, BUSINESS WEEK . . . plus 55 Business Publications.

DIRECT MAIL . . . in all the most successful forms.

NEWSPAPER MATS . . . a wide assortment.

DEALER IDENTIFICATION . . . a variety of fine quality displays.

GET IN TOUCH WITH THE EXIDE WHOLESALER

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32 • Exide Batteries of Canada, Limited, Toronto

Exide . . . means business

Third Service Peak . . (*Continued from page* 92)

public service promotion behind him the dealer can contribute more aggressiveness in his selling. It is true with all such promotions, that for every dollar contributed nationally, the local dealer collectively contributes at least ten dollars. This plan would have to be industry-wide to be effective.

It is very possible that the reason Service is thought of by the automobile owner as onerous, expensive overhead, is because your Industry is not now working on a non-commercial level to emphasize the Peace of Mind and Satisfaction which comes from having had the car well serviced.

If you think of the 50 per cent of potential business which gets away as not being the fault of your individual selling, but as not existing at all because it hasn't been created, you will come closer, we believe, to selling it, than if you ignore this well-proved sales fundamental.

This is what you have to sell in service:

1. A product of vital service to millions.

2. A product which is the source of great pleasure—relaxation—and comfort to millions.

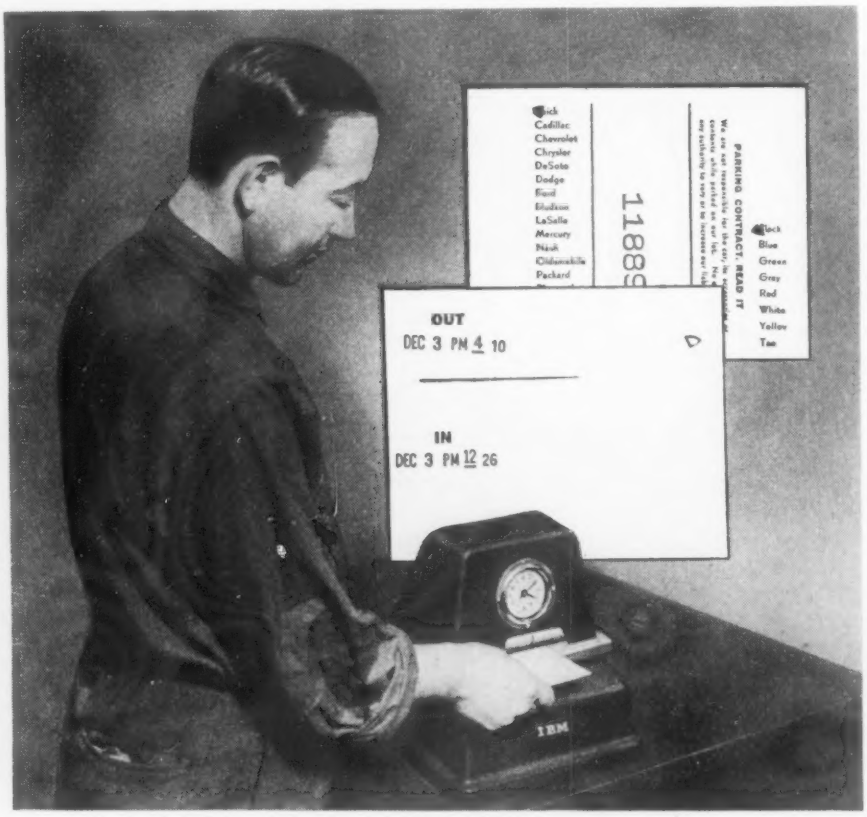
3. But also a product, which if neglected, is a menace to everyone.

Plus the fact that the greatest service, and pleasure, come together with the greatest danger and risk at a time when your business declines.

Now, let us suppose such a plan as I outline is organized—and headed up by a headquarters staff. The results would of course be open to everybody. That would have to be, or manufacturers could not be identified with it.

It would seem logical, therefore, that along with an industry-wide promotion should go a merchandising program which the wholesaler would organize. Wholesalers should not only use promotion material which will influence the dealer to tie up, but he should go further and help the dealer in his preparation of his own promotion material which can go to the automobile owner.

I believe that you members of the N.S.P.A. should invite the members of the M.E.W.A.—and together become the springboard for this development. I believe you will find that when the dealer sees he is backed by the entire Industry not only with advertising and promotion but also by a publicity program which is non-competitive and in the interest of the public, you will find the dealer with you in this promotion.



Accurate Time Records are *Easy* to Keep

Every garage and parking lot owner needs accurate time records for billing purposes. The labor time spent on maintenance and repair of an automobile, the number of hours a car is parked—these records must be exact for complete fairness to the owner and to the customer.

Exact time records are easy to keep with IBM Job Recorders. A job card or parking ticket is simply inserted in the recorder which *automatically* prints the date, hour, and minute.

For more complete information write or telephone the IBM branch office nearest you.

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TIME RECORDERS AND ELECTRIC TIME SYSTEMS

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International Business Machines Corporation, World Headquarters Building, 590 Madison Avenue, New York 22, N. Y.

Easy way to give yourself a pat on the back!

WHO'S going to know you are using the highest quality parts for replacements unless *you* tell 'em? If you put a Timken tapered roller bearing in a customer's car, point it out to him. He knows Timken is best. And he knows that if you put a bearing marked "Timken" in his car, you must know what you're doing!

So, to get yourself a pat on the back from your customers . . .

. . . Just tell 'em it's "TIMKEN"*

It's no wonder Timken tapered roller bearings are first choice on cars, busses and trucks! They take any combination of radial and thrust loads, eliminate friction, reduce wear, keep parts in rigid alignment, and normally outlast the vehicle itself!

The Timken Company is the only bearing manufacturer in America which makes its own steel. And it is the undisputed leader in: 1) advanced design, 2) precision manufacture, 3) rigid quality control, 4) special analysis steel.

To guard your reputation for topnotch service, make sure the "Timken" trademark is on every tapered roller bearing you install. The Timken Roller Bearing Company, Canton 6, Ohio.

TIMKEN

*TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION

Thor JOBBERS

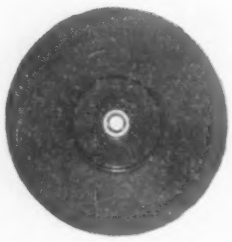
THE NEW Thor STANDARD DUTY 7″ POLISHER

50% MORE POWER THAN ANY OTHER POLISHER IN ITS WEIGHT CLASS!

- *Rubber Bumper Guard*
- *1400 R.P.M. Free Speed*
- *Weighs only 9 Lbs.*

YES—50% more POWER than any other polisher in its weight class! Removes embedded dirt and grime quickly and easily, brings original color and body luster up factory-new! Streamlined design, perfect balance, effortless handling. Rubber bumper guard protects work and tool. Ball bearings throughout. Ask your Thor jobber to let you try this outstanding new polisher on your own car today!

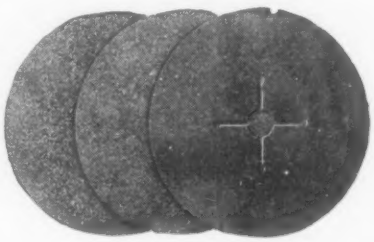
Only Thor accessories are built to last longer under the added power of the new Thor tools!



Rubber Backing Pads

Felt Backing Pads

Polishing Bonnets



Abrasive Discs in Popular Grades and Grits

ANNOUNCE...

THE

NEW Thor

STANDARD DUTY

7" SANDER

50% MORE POWERFUL THAN ANY OTHER SANDER IN ITS WEIGHT CLASS!

- *Ball Bearings Throughout*
- *Rubber Bumper Guard*
- *Spindle Lock for Easy Disc Change*

No sanding job too tough for the might of this new and more powerful Thor electric sander. Saves five minutes in every ten removing paint, corrosion, oxidation, cleaning and smoothing metal and wood. New streamlined design, rubber bumper guard, spindle lock for quick disc change—all the features you've waited for in the industry's most advanced sander. Ask your Thor jobber for a demonstration today!

INDEPENDENT PNEUMATIC TOOL COMPANY
600 West Jackson Boulevard, Chicago 6, Illinois
Export Division: 330 W. 42nd Street, New York 18, N. Y.
Birmingham Boston Buffalo Cincinnati Cleveland Denver Detroit Houston Los Angeles Milwaukee New York
Philadelphia Pittsburgh St. Louis St. Paul Salt Lake City San Francisco Toronto, Canada Sao Paulo, Brazil London, England

Thor PORTABLE POWER TOOLS

ONLY THOR JOBBERS SELL THOR TOOLS FOR EVERY SHOP'S EVERY JOB!

And these mean *MORE* profit to you from your undercoating service. Because Fendix has greater solids content than conventional undercoating material, Fendix sprays *more* square feet per drum . . . goes farther . . . brings *more* profit to you!

In addition, Fendix gives you greater safety. Underwriter's Laboratory tests indicate that Fendix has a high flash point . . . it is in the same class as ordinary kerosene. Safe to store, safe to use!

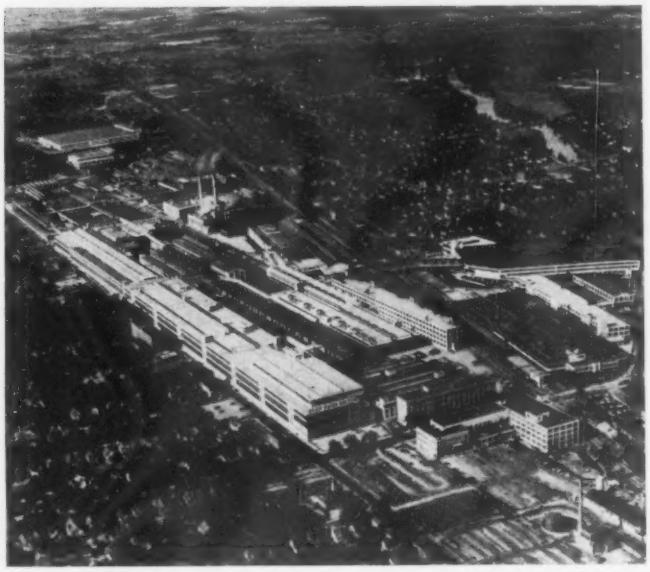
And there's *more*—the Fendix "Personalized Selling Plan" . . . FREE advertising and sales promotion material for every Fendix dealer . . . thorough training right in your own shop. Want the whole story? Write today to have a Davison factory representative or approved Distributor visit you to explain why you get *more* profits by selling "Silentize with Fendix."

*REG. U. S. PAT. OFF.
†T. M. REG. APP. FOR
©TDCC

THE DAVISON CHEMICAL CORPORATION
Progress through Chemistry
BALTIMORE-3, MD.

FENDIX SALES AND SERVICE OFFICES IN PRINCIPAL CITIES

Buick Announces Completion of Gigantic Expansion and Modernization Program



An aerial photograph of the Buick Motor Divison's 220-acre manufacturing plant at Flint, Mich., taken shortly after completion of its huge post-war expansion program.

Buick has announced completion of its huge post-war reconversion, expansion and modernization program comprising 17 new buildings and more than 2,000,000 square feet of new floor space for manufacturing, assembly, foundry, forge and shipping operations.

Harlow H. Curtice, Buick general manager and vice president of General Motors, said the extensive Buick building program, which required more than two years to complete, provides balanced, integrated facilities for production in excess of 500,000 Buicks annually.

Buick's peak output before the war was achieved during the 1941 model year when approximately 378,000 cars were produced. Pre-war production totaled about 1,800 cars daily.

Largest of the new buildings, completed this month, is Buick's new sheet metal plant with 753,000 square feet of floor space for stamping, welding and painting hoods, fenders and the hundreds of other sheet metal parts required in manufacture of Buick cars. The four-story building, a half-block wide, 90 feet high and 1,536 feet long, is fitted with escalators for employe convenience.

"Completion of the reconversion and expansion program," Curtice said, "is one of the most significant developments in Buick's 44-year history. We have spent millions of dollars to give Buick this most modern, advanced manufacturing set-up. In addition to new buildings, we have purchased and installed upwards of 2,500 new machine tools in manufacturing engines, axles, transmissions and other major components."

Buick's reconversion program required the demolition and removal of original Buick factory buildings, some of them Flint landmarks erected more than 40 years ago. New construction was carried on simultaneously with car manufacturing operations.

(*Continued on page* 104)

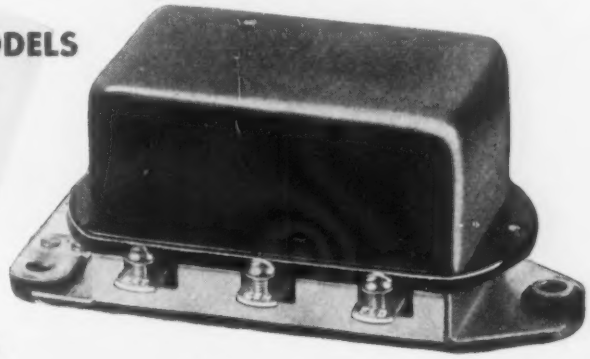
Electra

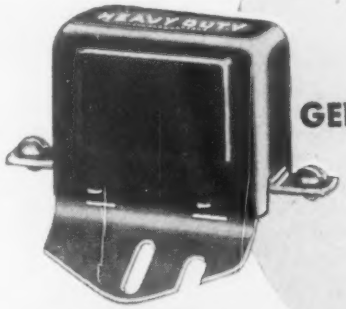
AUTOMOTIVE
ELECTRIC CONTROLS

An important profit line for you . . . and here is why! American car owners buy $69,550,000 worth of replacement regulators, relays and switches annually. That's almost *$2.00 in sales for each car and truck registered.*

Electra gives you one of the most complete lines with which to sell this volume market . . . 39 models precisely engineered to fit each of 48 makes of cars, from American Bantam's to Willys' Trucks and model classifications from 1923 to 1947.

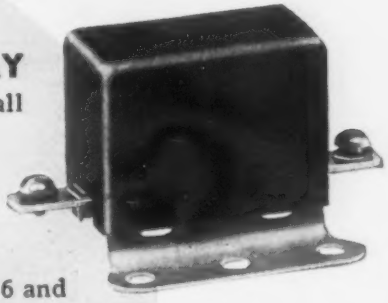
VOLTAGE REGULATOR — 14 MODELS
of 2 and 3 unit types. A complete replacement line for 6-volt systems.

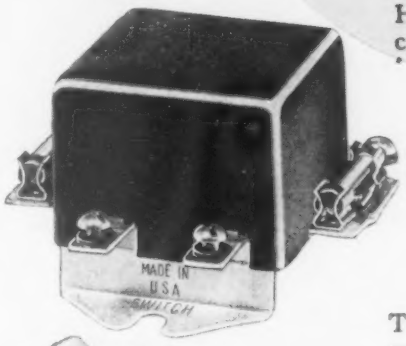




GENERATOR CUT-OUTS
9 models in 25 and 35 amperage capacities for 6 and 12-volt systems.

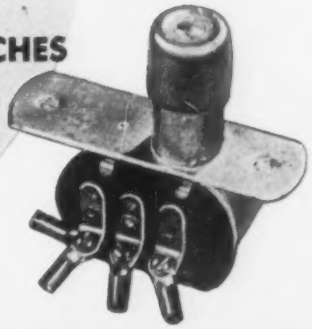
HORN RELAY
Heavy duty universal replacement for all cars.





HEADLIGHT RELAYS
Single and double unit relay for all 6 and 12 volt systems.

DIMMER SWITCHES
Two models furnish universal replacement for all cars.



STARTER SWITCHES
Nine models fit 65 car applications.

Electra **MANUFACTURING COMPANY**
Main Offices: 2537 Madison Street, Kansas City, Mo.
Plants • KANSAS CITY, MO. • ATCHISON, KANS.

Any way you look at it.

This is the new DE LUXE SET package, with the patented lock to prevent substitution of inferior linings. Each piece of lining is branded for the shoe position for which it is designed. Complete re-lining instructions on an easy-to-read chart are packaged with each set. These DE LUXE SETS effectively service every type of brake used on 96% of all cars. The Sets are composed of a variety of materials, with varying friction characteristics, so that the best possible lining or a combination of linings is provided for every brake job.

DE LUXE BRAKE SETS • MOLDED AND WOVEN LINING

IT RATES!

The more you look at the new AMCO set-up—the better you'll like it! It rates on every score!

Look at AMCO's newest and smartest three-color packaging that MEANS BUSINESS! Look at AMCO's *SAFETY RATED* performance that BUILDS BUSINESS! With one of America's most modern brake lining plants back of you, you're assured a SOUND BUSINESS with PLUS PROFITS! Get all the facts about the extra profits you can make with the AMCO *complete* line! Write Asbestos Manufacturing Company, Dept. A-4, Huntington, Indiana.

Safety Rated

Through Service to
CAR, TRUCK FACTORIES

For twenty-three years, AMCO's production facilities principally have been in the service of the car and truck factories. The know-how for building brake lining that meets original equipment specifications and proving ground tests year after year is further assurance of *SAFETY RATED* performance when you buy and sell AMCO.

Safety Rated

BY LABORATORY TESTS

AMCO quality standards demand rigid multiple tests and inspections throughout the manufacturing process. These manufacturing tests plus laboratory tests for friction, fade, durability, etc., insure *SAFETY RATED* performance for every AMCO product so rated.

Safety Rated

BY PERFORMANCE RESULTS

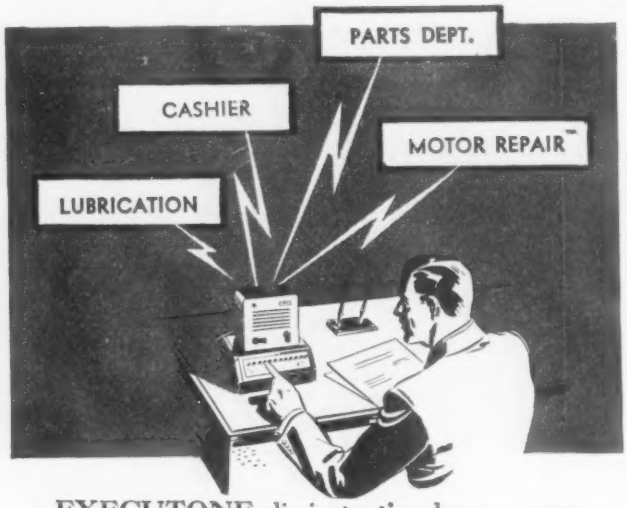
Billions of brake miles' experience under every possible service condition with large and small cars, tractors, buses, and trucks is further assurance that AMCO has the know-how to build brake lining that is time-proven to be *SAFETY RATED* all ways!

ASBESTOS MANUFACTURING COMPANY HUNTINGTON, INDIANA

Copyright 1948 By Asbestos Mfg. Co. R-2629

CLUTCH FACINGS • HOSE • CAR MATS • FAN BELTS

SPEED UP YOUR SERVICE DEPT. with Electronic Intercom



EXECUTONE eliminates time lags . . . saves untold hours of costly labor and keeps customers happy with prompter delivery of service jobs. Instantly, without going through your office switchboard, you can talk to shop men, assign jobs, check work schedules, or order needed parts. You can even talk with mechanics while they are working under cars! 2 stations for as little as $61. Systems with up to 100 stations are available.

Unconditionally Guaranteed!

Executone Inter-Com Systems are engineered to your requirements and unconditionally guaranteed. Installed and serviced by factory-trained specialists in principal cities. Over 100,000 installations prove Executone's dependability and leadership.

Two stations cost as little as $61. Systems with up to 100 stations available.

Executone

COMMUNICATION & SOUND SYSTEMS

Mail Coupon for Further Information

EXECUTONE, INC. Dept. A-8
415 Lexington Ave., New York 17, N. Y.
Without obligation, please let me have—
☐ New EXECUTONE Booklet "A Modern Control System."
☐ A look at EXECUTONE in my office.

Name_____
Firm_____
Address_____ City_____

New Buick Plant . (*Continued from page* 100)

Completion of the expansion program gives Buick more than 6,819,604 square feet of floor space on its 220 acres of manufacturing area in Flint. Synchronization of these new units with other Buick buildings required expansion of existing power facilities to service the enlarged structures, and conversion of an aluminum foundry for machining operations.

Harley-Davidson Presents a New Single Cylinder Motorcycle at Sales Conference

At Milwaukee Harley-Davidson dealers and associates, numbering some 800, recently witnessed the unveiling of the single-cylinder model-"125" motorcycle on the occasion of the Harley-Davidson National Dealers' Conference.

In a welcoming address, General Sales Manager Arthur Davidson outlined the theme of the conference —coordination of sales strategy—after which William J. Harley, chief engineer, gave dealers their first view of the gleaming black-and-chrome machine.

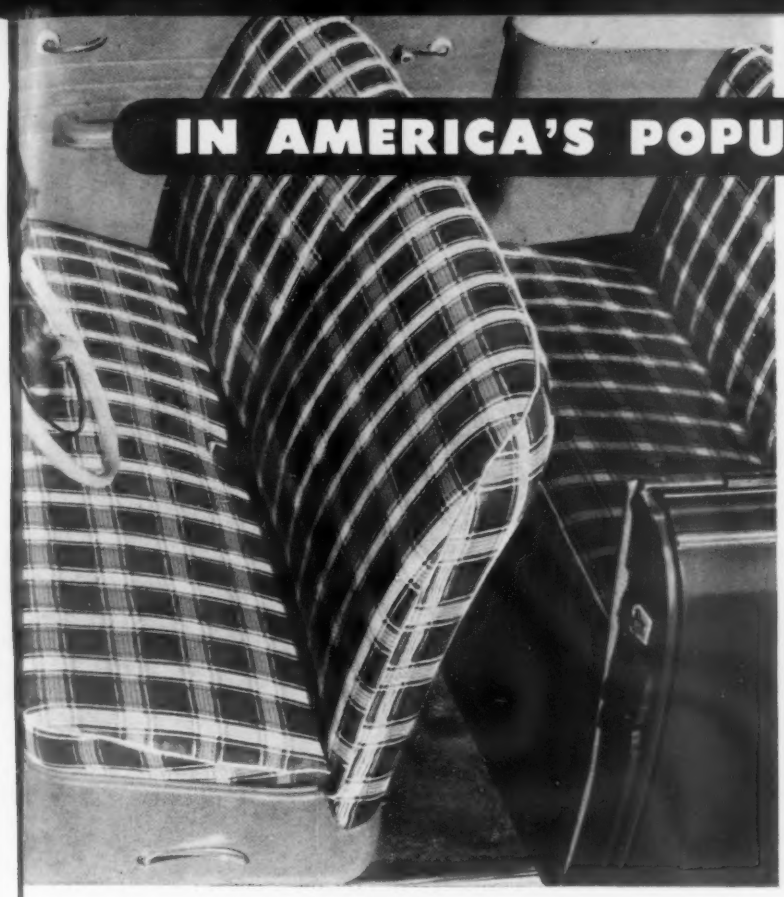
Harley explained that the new motorcycle weighs approximately 170 pounds, is of 2-cycle design, and has a piston displacement of 125 cubic centimeters. He added that the clutch is of the wet disc type controlled by a hand lever on the handlebars.

A 2-way FM radio-equipped Servi-Car for police patrol work was introduced with the company's regular line of 1948-model motorcycles. The 3-wheeled "talkie" cycle operates on the very high frequency of 152,000 kilocycles, far beyond the range of the average standard broadcast receiver.

A "push-to-talk" button on the microphone permits the operator to go on the air in split-second time.

The 125 cubic centimeter motorcycle is an addition to the established line of 45, 61, and 74 cubic inch motorcycles, Servi-Cars, and Package Trucks.

W. J. Harley, chief engineer of the Harley-Davidson Motor Company, Milwaukee, Wis., points to the 3-speed foot-operated gear shift of the firm's new single cylinder model "125". Around the motorcycle are (L to R) G. M. Davidson, vice president; A. Davidson, general sales manager, and W. H. Davidson, president.

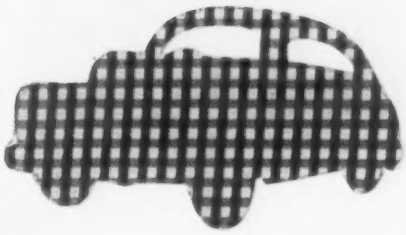


IN AMERICA'S POPULAR AUTOMOBILES . . .

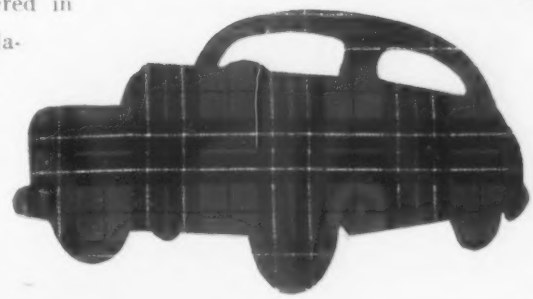
IT'S FABRICS WOVEN OF

Saran BY NATIONAL

MONOFILAMENTS



There's greater beauty and more driving comfort in the car that's upholstered in fabrics woven of SARAN monofilaments. For these colorful materials keep their good looks indefinitely . . . always remain fresh and trim. You slide smoothly into these seats without tugging or pulling on your clothes.



SARAN woven fabrics are designed specifically for their purpose. No danger of harming them with dirt or grease . . . or Junior's muddy shoes. These fabrics resist chemicals and acids, too, and they stand up against scuffing and the hardest kind of wear.

SARAN monofilaments offer unlimited possibilities for weaving striking patterns and interesting textures into exciting fabrics that are easy to sell. There's an upward turn in textile quality today because the swing is to SARAN!

TRADE MARK REG. U. S. PAT. OFF.

The NATIONAL Plastic Products Company

ODENTON • MARYLAND

NEW YORK: EMPIRE STATE BUILDING • LOS ANGELES: BANKERS BUILDING

THIS FULL PAGE, *two-color advertisement appeared in the November 15th issue of The Saturday Evening Post. It was the first of the 1947-8 campaign of advertising in national magazines, farm papers and a selected list of newspapers.*

"Heap smart fella *service 'em, too*"

Yes, it's smart driving to use WEED CHAINS—Smart business to sell, service and repair them.

Extensive advertising continues to promote more general use of tire chains—and establish the fact that WEED AMERICANS are the best buy in tire chains.

Remember that WEED offers you the 3-way profit plan.

1. **SALES—Supplies are limited. But every pair helps build profit and good will.**
2. **SERVICE—Putting on and taking off chains is a profitable service.**
3. **REPAIRS—WEED Chain repair tools make a quick, easy job of it.**

ACCO

York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, Bridgeport, Conn.

AMERICAN CHAIN DIVISION
AMERICAN CHAIN & CABLE

TRADE MARK

In Business for Your Safety

 (Continued from page 37)

to the maintenance field that it is presented in detail in this issue. Mr. Maxted pointed out that at present there are two service peaks. One in the spring when car owners have their cars prepared for summer driving and the other in the fall when the rigors of winter driving are anticipated. In this way, safety, which is probably the most important element of driving is overlooked and Mr. Maxted emphasized the value and advantages of selling safety during the summer and thus creating a third service peak.

At the meetings of the MEWA the subjects discussed came under two main classifications: The analysis of car factory distribution plans and the "basic changes in the ASI Show." The latter dealt with who shall be admitted to the ASI Show. The former was developed by a panel of four men with a discussion from the floor.

Of particular interest also was the formation by the MEWA of the Junior Executive Group. W. Thomas Mills, Jr., was elected chairman, and committees were formed to discuss plans on methods of aiding the parent association.

John E. Peters, assistant to the general manager of the MEWA, and Carl Hendricks, chairman of that Association's Advertising Service Committee, spoke on advertising and sales promotion for wholesalers.

Winding up the MEWA Convention, Carlyle Emery, vice-president of Ruthrauff and Ryan Advertising Agency, gave an address entitled, "High Hats and Brown Derbies."

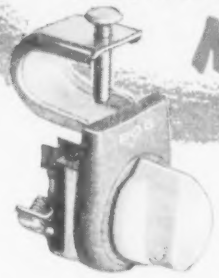
The MEMA elected A. E. Keough, of John T. Stanley Co., New York, president. B. G. Cochrane, of Casco Products Corp., Bridgeport, Conn., was chosen vice-president and W. M. Albaugh of Thompson Products, Cleveland, was selected to be secretary.

NSPA, elected E. M. Sheehan, of the Motive Parts Co., Pittsburgh, Pa., president. Charles P. Crowder, of the Van Norman Co., Springfield, Mass., was elected senior vice-president and G. W. Kleinschmit, of the Automobile Equipment Co., Detroit, junior vice-president.

The newly elected officers of the Automotive Boosters Club Interna-

(Continued on page 108)

Replace
HEATER
FOG LAMP
LIGHT
Switches
NOW!

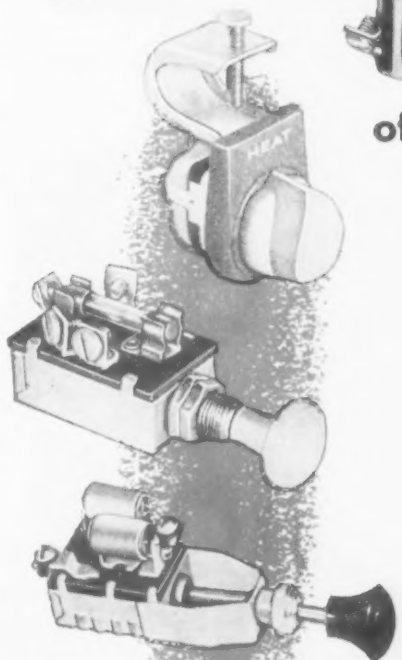


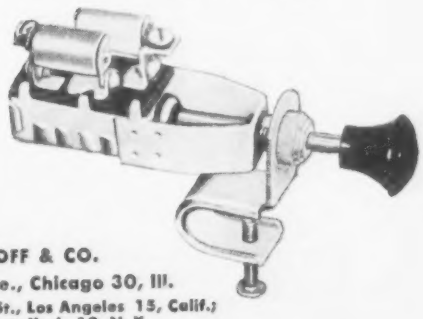
Available
For All Makes
of Popular Cars & Trucks

Niehoff Approved Quality thru-dash or clamp-on type Automotive Switches, with push-pull or rotary "on" and "off" action for universal application, are now available through your Jobber.

Check switch replacements for efficient heater and proper lighting on all cars and trucks NOW!

Ask Your Jobber Today!





C. E. NIEHOFF & CO.
4920 Lawrence Ave., Chicago 30, Ill.
Branches: 1342 S. Flower St., Los Angeles 15, Calif.; 250 W. 54th St., New York 19, N. Y.

NIEHOFF
APPROVED QUALITY PRODUCTS

 (Continued from page 107)

tional are as follows: Carl L. Broich, president; Thomas A. Rowe, first vice-president; Carson W. Chiles, second vice-president; Henry S. Clark, treasurer; Daniel J. Hartnett, secretary.

Of particular interest was the action of 92 per cent of the MEWA in giving their Board of Directors complete authority to decide whether next year's Show is to receive that Association's sponsorship.

Throughout show week there was evident an undercurrent of quiet confidence in service business prospects for 1948. Exhibiting manufacturers and attending jobbers had enjoyed a particularly good business year during 1947 and all seemed to feel that, even with sharpened competitive conditions, the 1948 service market will continue to be an abnormally large and active one.

Longenecker Named To Packard Parts Post

E. D. Longenecker has been promoted to manager of the parts and service department of the Packard Motor Car Company, Karl M. Greiner, general sales manager, announced recently.

Assistant parts and service manager from September, 1944, shortly after he joined Packard, until his promotion, Longenecker's background "qualifies him in every respect for this post which has come to the fore at Packard in recent years as a major activity important alike to our owners, dealers and the factory," Greiner said.

Longenecker was engaged in field service work as service representative and zone service manager with a General Motors Corp. division from 1928 to 1938, when he was appointed to the faculty of the General Motors Institute. After a year as instructor in retail service management fundamentals, he became Pacific Regional manager for the Detroit Diesel Engine division.

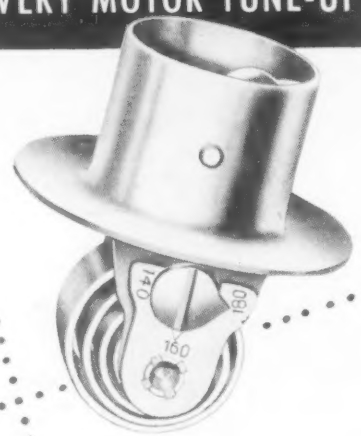
At the close of 1941, he went with the Anaconda Copper Mining Co. as a development engineer in the Basic Magnesium division and remained there until he joined Packard.

Longenecker received his education at Purdue University and Ohio Northern University.

Just remember to put a replacement thermostat on every job ticket for a motor tune-up. That's the quick, easy way to add a sound and *profitable* "extra" on every sale—a little *pork with your beans.*

Only Dole Thermostats are adjustable to seasonal needs —high start to open for winter —low opening temperature for summer. This feature assures quick warm-up and improved performance—*plus* substantial savings in gas, oil and motor wear.

like THERMOSTAT REPLACEMENT *with* EVERY MOTOR TUNE-UP



DOLE *Adjustable Thermostats*

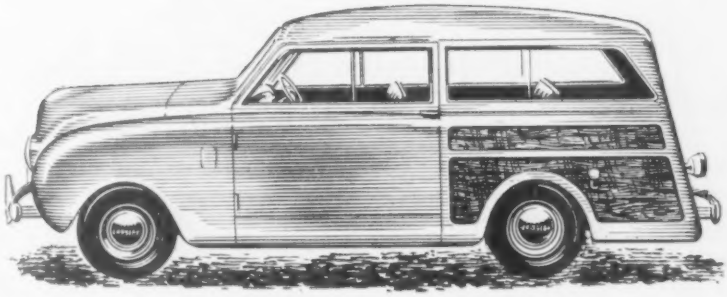
THE DOLE VALVE COMPANY
1901-1941 Carroll Avenue, Chicago 12, Illinois
Representatives in Principal Cities

If there's no Crosley Dealer in your territory . . . *this may be YOUR big chance!*

"Constantly increasing production will now allow us to again expand our dealer organization and still deliver promptly".

Powel Crosley Jr.

President, Crosley Motors, Inc.



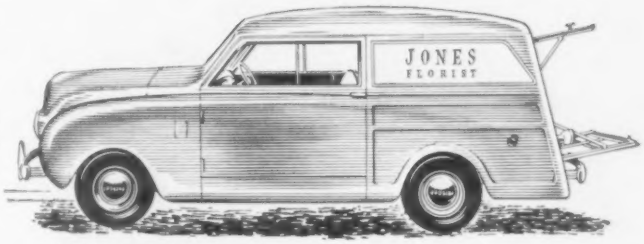
CROSLEY STATION WAGON—Seats 4 with plenty of luggage space. Rear seat removable. All steel. Variety of colors. Lists at **$929***

Introduction of the sensational new CROSLEY STATION WAGON and the amazingly low priced SPORTS-UTILITY opens even greater opportunities for volume and profit for Crosley dealers. The Crosley line is now "rounded out". It gives you a car for every type of customer. And customers of every type have definitely shown that they are eager for CROSLEY—a light, fine car at a sensible, low price.

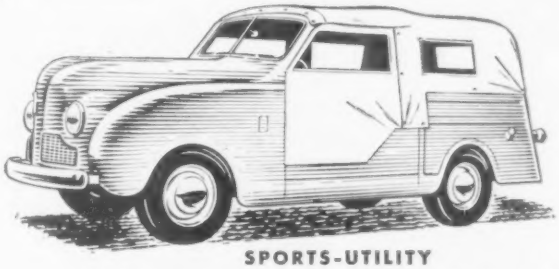
This is proved dramatically in New York City, Los Angeles, and the Miami-Palm Beach area. At first we frankly made preferential deliveries to these areas because of the number of out of town visitors who would see CROSLEYS there and carry the good word home. Today there are 1420 CROSLEY CARS in and around New York. The Miami-Palm Beach area, with only one dealer, has 550 cars. 1143 CROSLEYS have been shipped to one dealer in Los Angeles County. For instance, the Los Angeles dealer took orders for 17 cars one day, 15 the next, and on and on.

Yes, CROSLEY MOTORS has definitely proved that there is a substantial ready market for this sensible, low cost car. If there is no dealer in your community, write today. It may be your big opportunity.

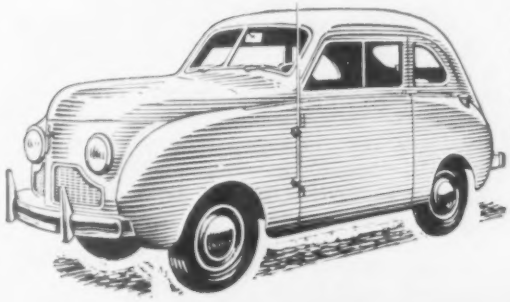
CROSLEY CONVERTIBLE—Carries 4 husky passengers plus luggage. Easy to manage laminated cloth top. Lists at **$899***



PANEL DELIVERY—Full quarter ton capacity. All steel. Full opening rear end. Lists at **$899***

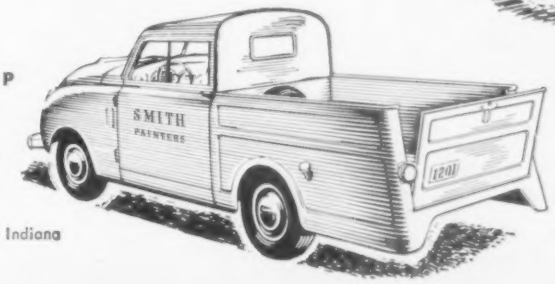


SPORTS-UTILITY—America's lowest priced car. Removable fabric top and sides. Removable rear seat. Lists at **$799***



CROSLEY SEDAN—Over 15,000 on the road. Proven by long service, a fine car for all around use. Lists at **$888***

CROSLEY PICKUP—Quarter ton capacity. Drop tail gate. Roomy comfortable cab. Lists at **$839***



*Prices are F.O.B. Marion, Indiana

CROSLEY

a ***FINE*** *car*

Crosley Motors, Inc., 2534-DA Spring Grove Ave., Cincinnati 14, Ohio

In writing, address Powel Crosley, Jr., President

GM Parts Plan . . . . . (*Continued from page* 39)

car factories could grant larger discounts on parts which they purchased from parts manufacturers, it was pointed out that not only were selling costs lower, but also it was not necessary to package parts in high priced cartons and other expensive merchandising helps.

Jack Wiggins, who has just been advanced to the executive Vice-Presidency of NSPA, emphasized that car dealers as a result of their war experience are doing more work on cars other than those for which they are franchised than at any time in their history. Under all the new car manufacturers plans a car dealer can more profitably buy parts for those cars from a wholesaler than he can from a competing car dealer. Wiggins also pointed out the reluctance of individuals to purchase articles from competitors. Some manufacturers have already revised their price lists to enable the wholesaler to get business from the car dealer and Wiggins' remark that it is just as important for a manufacturer to keep wholesalers competitive as it is for the wholesaler to be competitive.

Henry Trauscht, an NSPA member, and a wholesaler, whose remarks on the GM plans excluded those of AC, Packard and UMS, said that some wholesalers were contemplating putting the "B" resale schedules into effect across the board as an answer to the problem, instead of selling the quality of the merchandise and services that wholesalers had to offer. To cut prices would only result in arousing the independent car factories into a justifiable retribution in their system of selling parts, Trauscht pointed out. He concluded his address by pointing out that one of the most important things to do was that the manufacturer-wholesaler team must cooperate and function efficiently.

Ohio Dealers Convention Elects New Officers

At the annual election of officers for the Ohio Automobile Dealers Association the following dealers were elected for the year: President, Ray Brandenburg of Washington Court House; 1st Vice President, R. E. Reinhold of Cincinnati; 2nd Vice President, Harold R. Wood of Columbus; Secretary, John L. Hanley of Toledo; Treasurer, C. C. Corbin of Akron.

" . . . but where would youse be, warden, if it wasn't for guys like me?"

Knee-Action Shocks
Double-Acting Shocks
Single-Acting Shocks
Direct-Action (Airplane-Type) Shocks

The right types of shock absorbers for *all* makes of cars—that's what you get when you handle Delco Shock Absorbers.

This fact alone means more business for you, more dollars in the till.

But *completeness* isn't the only advantage of the Delco Shock Absorber line. Delco Shock Absorbers have *acceptance*, too. They're the original-equipment leader in the field . . . used on more NEW cars than any other make. More than 65,000,000 Delco Shock Absorbers are in use today.

Take advantage of the huge, ready-made market that is yours with the *complete line* of Delco Shock Absorbers. Your United Motors distributor is well stocked to take care of you. Delco Products Division, General Motors Corporation, Dayton, Ohio.

FIRST IN COMFORT . . .
FIRST IN ACCEPTANCE!

UNITED SERVICE MOTORS

DELCO SHOCK ABSORBERS
A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

DELCO HYDRAULIC SHOCK ABSORBERS

Ford Truck Line . . . . *(Continued from page 65)*

type instead of six as used heretofore on that engine. The combination fuel pump and filter is driven from the camshaft at the front right side of the engine. An oil filter is mounted on the left side of the engine. There are no external oil lines. The system is described as giving full flow filtration and an oil relief valve is provided ahead of the filter for protection.

Turning now to the chassis, a 10-inch plate clutch is used on the F-1 Series, while 11-in. units are provided on the F-2, 3, 4, 5, and 6, while a 12-inch clutch is provided for the F-7 and 8. A three-speed transmission is used on the ½-ton or F-1 Model, while four-speed units are supplied on all other models except the F-7 and 8 which are equipped with transmissions of the five-speed type. A removable flywheel housing has been added to all models so the flywheel can be removed without removing the oil pan.

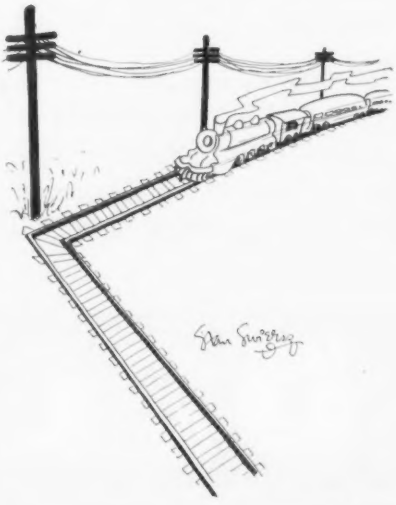
Springing on the lighter chassis is of conventional semi-elliptic type with direct double-acting shock absorbers. Progressive springing is offered on the F-5 school bus chassis, while main and auxiliary springing is standard on the F-6 and larger chassis.

An open propeller shaft or Hotchkiss drive, is used on all models. Reduction gears on the Six are hypoid. Furthermore, on this model there is a cover plate on the differential housing to permit removal of that unit without separating the housing.

The new flanged-type axle shafts are splined at the inner end and held in place by the backing plate. Another departure from standard Ford practice is the use of Bendix two-shoe hydraulic brakes with the conventional star wheel adjustment and removable rear brake drums instead of the integral hub and drum construction used in the past.

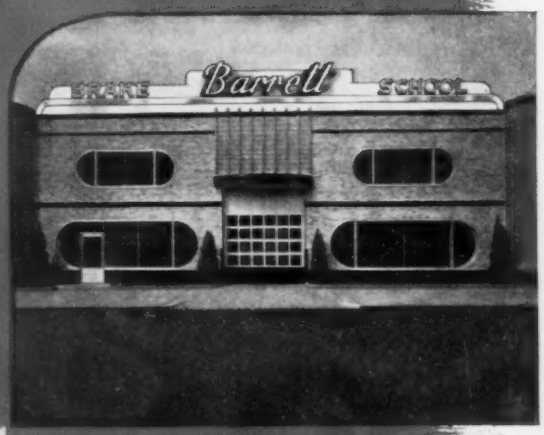
Radiator and front fenders are cradle-mounted for ease of disassembly.

These many innovations in Ford design will completely change the service procedure on the light truck and if this chassis is to be used as the new passenger car as some observers believe, its effect on the maintenance field will be revolutionary.



THE NEW BARRETT BRAKE SCHOOL

An Opportunity To Become A Brake Specialist



THE BARRETT BRAKE SCHOOL began operation in March with a specially selected group of experienced instructors of the highest calibre, and the finest of modern equipment. It is devoted to the training of men who service brakes.

Applications for this specialized brake service training should be made to your nearest Barrett Jobber, or direct to the Barrett Brake School. No tuition is charged while pilot classes are in operation.

BARRETT BRAKE SCHOOL

DIVISION OF BARRETT EQUIPMENT COMPANY • 21ST & CASS • ST. LOUIS 6, MO.

Pop O'Neill . . . . . (*Continued from page* 72)

of the bluster out of him. "What's this you been tellin' the kid about the lousy job we done on your battery?" Larry demanded.

The customer peered at him with mild blue eyes. "The boy must have misunderstood," he said. "I didn't complain about the job. I simply said that my battery was down again this morning."

"It couldn't have been down," said Larry. "Every cell was right up to snuff when I tested it."

"I didn't come in here to argue," said the customer, "or to be contradicted. I said my battery is down and that's what I mean. Are you going to do anything about it?" The mildness had gone out of his eyes and his lips were a hard, thin line of determination.

"That depends," said Larry. "How do we know what you was doin' with the car after you left here. You mighta parked all night with the lights on. Or you mighta—"

The customer held up his hand. "You've said enough," he warned. "Where's the man who owns this shop?"

"It just happens," said Larry with a mocking smile, "that he ain't here. And when he ain't, I'm in charge."

"What a pity!" The customer's jaw muscles were tightening. "But I still intend to see him."

"I told you he ain't here," said Larry, raising his voice.

"Who ain't here?"

Both Larry and the customer turned at the sound to see Pop O'Neill emerging from the shop office. The customer looked down at Larry and smiled. Larry reddened to the toothed brim of his cut-down felt hat.

"Are you the proprietor?" asked the customer.

"I'm the man the bill collectors always look for around here," said Pop. "What's the shoutin' all about?"

"I really don't know," said the customer. "*I* wasn't the one who was doing it."

Pop frowned at Larry, and the latter's bluster went out of him

(*Continued on page* 116)

"Boy, is he stiff. What's he been drinking . . . starch?"

These four essentials comprise the *Complete* Paint Shop

1. **A Spray Booth**..providing adequate exhaust, scientific illumination and positive dust protection.
2. **An Assortment of Spray Equipment**...for factory quality results on all kinds of jobs with any spray material.
3. **An Adequate Air Compressor** . . . to provide ample low cost air for all paint shop and service requirements.
4. **Hose and Connections** . . . designed and built specifically for spray painting service.

with this Complete Paint Shop that's packed with earning power

More than one and three quarter million cars were completely refinished in 1947. And there were well over six million major and minor touch-up jobs. The figures for 1948 look even more promising. So now is the time to get into the big dollar repainting business in a big way.

The DeVilbiss Paint Shop, complete in every detail, equips you to do "Factory-Quality" repainting and to do each job easier and faster—which means more profits. Because it includes specialized guns and equipment to handle all types of paint jobs even to the extent of providing facilities for applying underbody coating, operators reap extra profits from every phase of auto painting. And the DeVilbiss distributor will give you complete details on how you can capitalize on today's tremendous refinishing market.

THE DeVILBISS COMPANY • Toledo 1, Ohio
Canadian Plant: WINDSOR, ONTARIO

DeVILBISS *means* Quality *in all four . .*

SPRAY EQUIPMENT
EXHAUST SYSTEMS
AIR COMPRESSORS
HOSE & CONNECTIONS

HARLEY-DAVIDSON SERVI-CARS

For Pick-up and Delivery Service

They Build More Business and Increase Profits for You . . .

- ✓ **Make it easy for customers to do business with you** — get them in the habit of calling you for ALL their service and repair needs.
- ✓ **Keep you in constant touch with your customers** — you get first "shot" at them when they're in the market for accessories or new cars.
- ✓ **Iron out "peaks and valleys" that cut down profits** — you bring in jobs when regular flow of work is slow — keep your mechanics busy at all times.
- ✓ **Enable you to quickly and economically give emergency "on-the-spot" service** — tremendous goodwill builders.
- ✓ **Draw business from a bigger area** — the whole city becomes your territory.
- ✓ **Solve car storage problems** — you get cars off your floor, out of the way, as soon as work is completed.
- ✓ **Handiest rig in the shop** — for running errands and picking up parts and accessories.
- ✓ **Continuous advertising at no cost** — carry your ad everywhere.
- ✓ **Servi-Cars spell profits** — profits you wouldn't get otherwise.

Call in your Harley-Davidson dealer TODAY!

HARLEY-DAVIDSON MOTOR COMPANY

DEPARTMENT MA • MILWAUKEE 1, WISCONSIN

Pop Assaults a Battery

(*Continued from page* 114)

like the air from a pricked balloon.

"I was trying to explain to your man," the customer went on, "that my battery went dead again this morning after he had recharged it the day before yesterday. What irritates me most is that I told him I'd been having the same trouble for a couple of weeks."

"It was okay when he drove outa here," protested Larry.

"How do you know?" asked Pop.

"How do I know?" echoed Larry. "Because I tested it, that's why."

"How?"

"With a voltmeter. And I even tested the specific gravity. There wasn't a thing wrong with any cell."

"Did you make a break-down test?" asked Pop.

Larry cast around in his mind for an evasive answer and could find none. "No," he admitted finally.

"It's a good idea to make one in a case like this." Pop turned to the customer. "Is your car outside?" he asked.

"Yes. The chap I was visiting here in Glenrock gave me a push to get started."

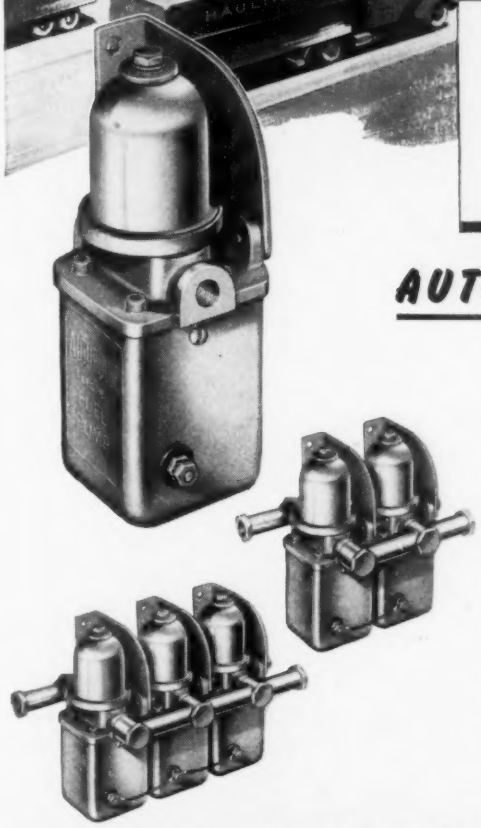
"Drive it in," Pop ordered Larry.

As soon as Larry rolled the car into the shop, Pop closed the door

(*Continued on page* 118)

"Better go home, Arthur. When he starts winding the clocks we're licked."

LICK THE FUEL PUMP PROBLEM FOR GOOD



AUTOPULSE—FITS ANY TRUCK OR BUS *and does a Better Job*

You don't need to continue stocking a different fuel pump for every make of vehicle. You can get rid of that inventory—*now*.

Autopulse Electric Fuel Pumps in single or multiple units will fit any truck, bus, or automobile—handle any liquid fuel in any climate or altitude in the world.

They're just about the easiest pumps to install—and they are so simple they hang up amazing records of long service. 2878

And the price is the same as it was before the war

AUTOPULSE Corporation

LUDINGTON, MICHIGAN

Pop O'Neill . . . . . (*Continued from page* 116)

and followed the car over to the bay into which Larry nosed it. The latter cut the switch and immediately stepped on the starter of the 1939 coupé.

"What are you tryin' to do, anyhow?" asked Pop.

"I'm gonna pull that battery down," answered Larry.

"Don't you think we oughta take a gander at it first just in case?"

"What for? You said to do a break-down test."

Pop simply shook his head and opened the hood of the car. He leaned over the fender to get a closer look at the battery. Hmmm," he said.

"What's wrong?" asked Tommy, whose curiosity had drawn him over to the dusty old black coupé.

"When there's anything wrong with a battery," said Larry, "you don't find it just by lookin' at it."

"I'll be back in a minute," said Pop, spinning on his heel.

Tommy bent over the fender. "That battery's awfully dirty," he said.

Larry looked around to make sure the customer was not within ear-shot. "Sure," he said. "It's crummy. That cheapskate has probably had it in there two or three years. And now he's tryin' to get us to squeeze a couple more weeks out of it for him. Why—"

He was interrupted by the return of Pop, who had a milli-ammeter in his hand.

"What do you think you're gonna find out with that thing?" asked Larry.

Pop did not bother to answer but leaned over the fender with the milli-ammeter. Tommy, straining to see what was happening, saw Pop touching one lead to the hot post of battery and the other to the sides of the battery case. After a few minutes, he straightened up.

He motioned to Tommy. "Take that battery out," he said, "and clean up the case."

Larry indulged in a short, derisive laugh. "I've seen some screwy diagnosin' around this here shop," he said, "but this one's gonna take the prize." He thrust

(*Continued on page* 120)

ENGINEERED INFORMATION

When and where you need it most

AT POINT OF USE!

IGNITION TUNE-UP KITS *Plus*

BLUEPRINT *Tune-Up* SPECIFICATIONS

For ALL POPULAR CARS and TRUCKS

The Essential Parts in 1 package *Plus* a Blueprint of the important tune-up data needed — included in every kit, to do the job right for the car you're working on. Keeps customers happy. Insures repeat profits.

The Parts You SHOULD *Have*

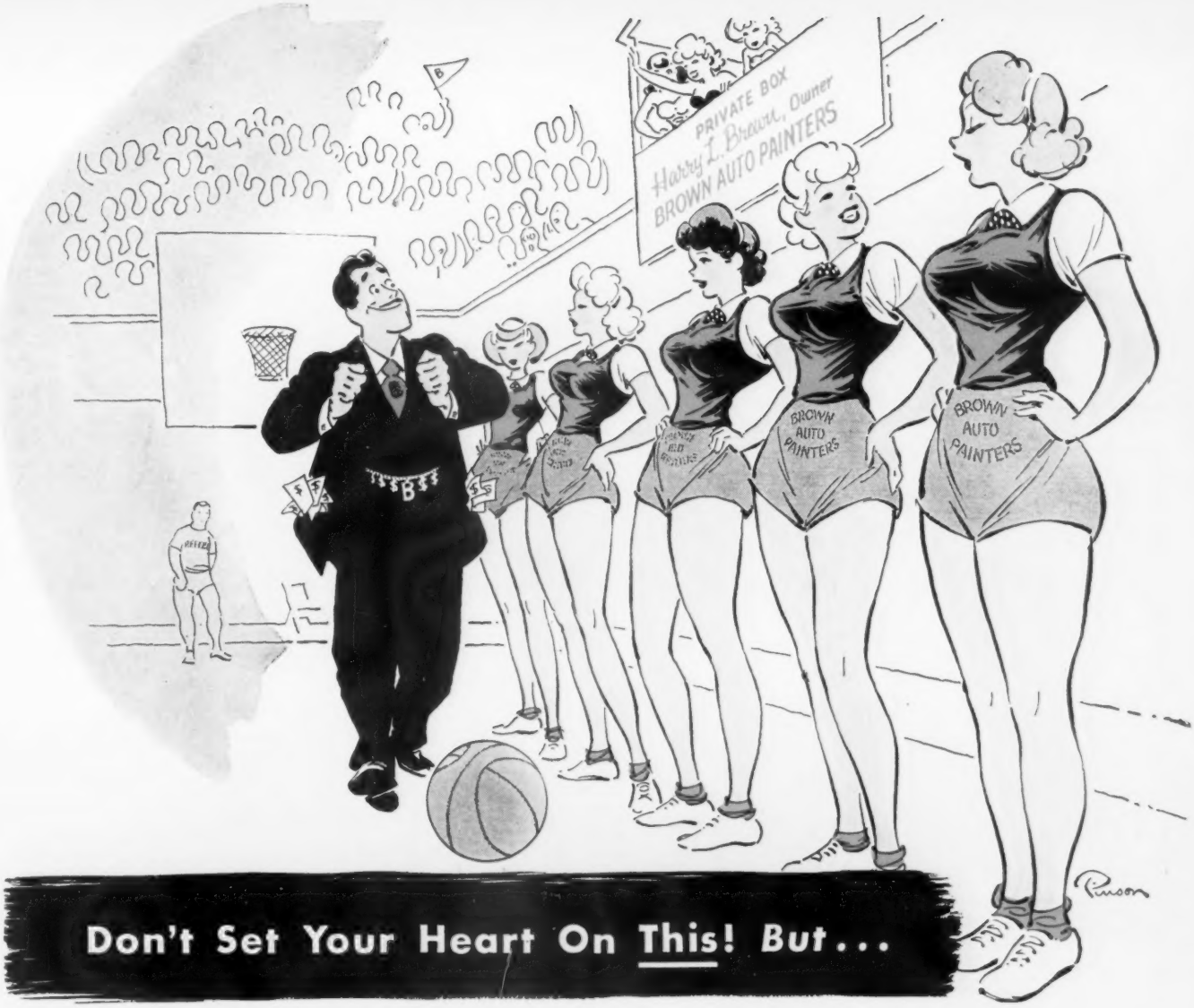
PLUS *the information You* MUST *Have*

Make the First Step Now toward MORE IGNITION PROFITS. Write today for Details of "Guaranteed's" Ignition Tune-up Kits Plus Blueprint Tune-up Specifications, or call your GP Jobber . . . NOW!

Guaranteed Parts Co., Inc.

Automotive and Aircraft Parts ★ SENECA FALLS, N. Y.

"My wife is the most even tempered woman in the world—always mad."



Don't Set Your Heart On This! But...

...YOU CAN MAKE MUCH MORE MONEY THE M-S WAY

Eight Quick Reasons to Switch to Martin-Senour

1. Higher painting profits.
2. Exact color match to car maker's specifications.
3. Top quality, top durability, top beauty.
4. No time wasted mixing or matching.
5. Patented pour-top can prevents waste.
6. No come-backs, no headaches.
7. Easier to handle... jobs out on time.
8. Available everywhere... call your N.A.P.A. jobber.

Our cartoonist gets *too* enthusiastic when he thinks about Martin-Senour automotive finishes. Fact is, you may *never* own a basketball team. But you *will* have more time and money to do the things you like. For every M-S finish exactly matches the car-maker's specifications. You don't waste time mixing and matching. And jobs turn out right first time. That means you paint more cars with less effort, that you get the most from expensive labor. To get exactly the right finish, simply check color, make and model in the handy M-S catalog and phone your nearby N.A.P.A. jobber. Soon we hope to supply M-S automotive finishes in unlimited quantities.

MARTIN-SENOUR

2520 Quarry Street, Chicago 8, Illinois

Pop O'Neill . . . . . (*Continued from page* 116)

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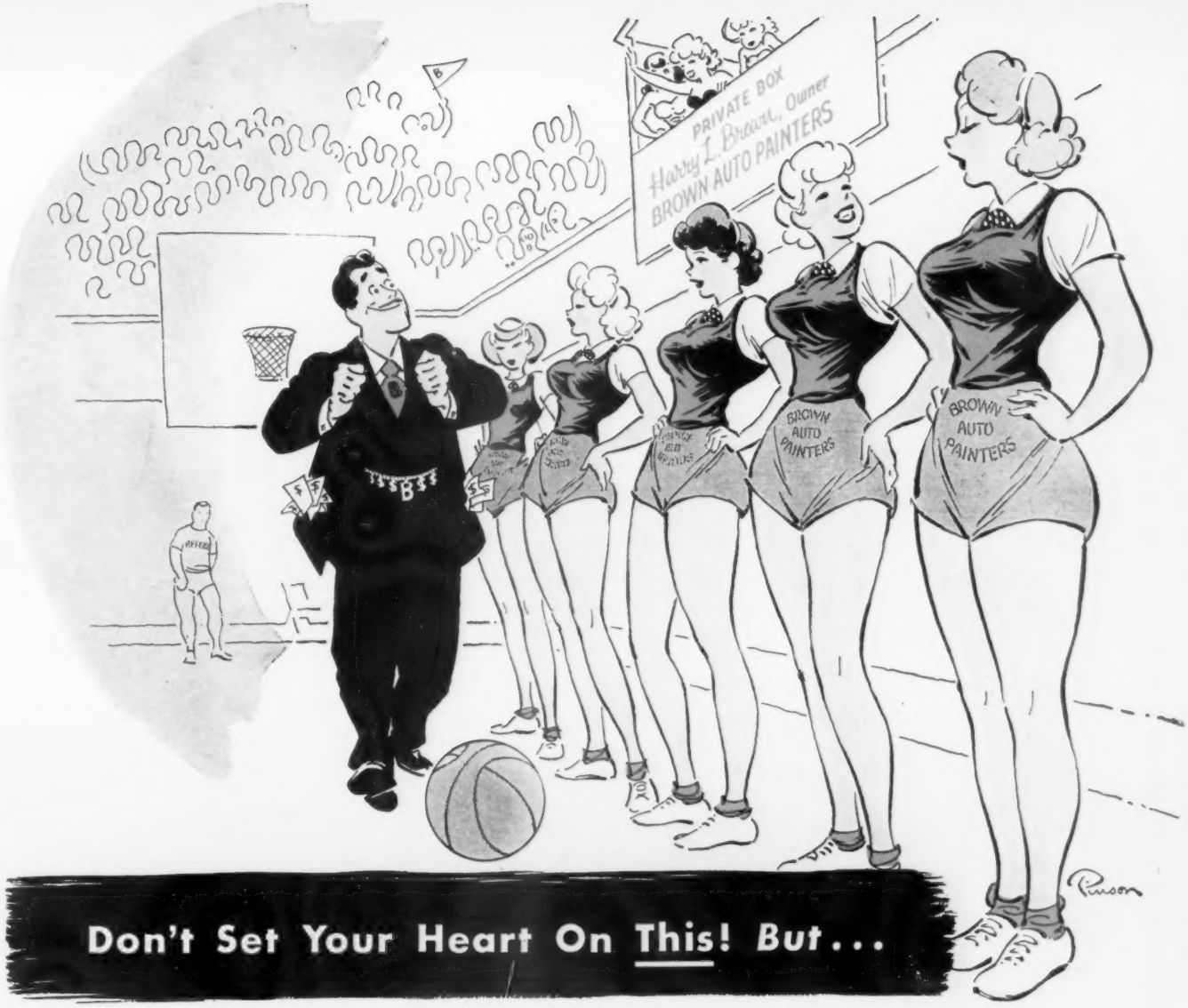

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MARTIN-SENOUR

2520 Quarry Street, Chicago 8, Illinois

Pop O'Neill . . . . . (*Continued from page* 118)

out his chin toward Pop. "What's a little crum on the outside of a battery got to do with keepin' a battery charged?" he demanded.

"Plenty," said Pop. "At least this time it has. There's so much corrosion and acid on the outside of that old case that the battery is dischargin' right through it."

"Is that true?" asked Tommy.

"You can see for yourself on this milli-ammeter," said Pop, "if you don't believe it. The trouble comes from filling the cells too full and from not keeping the terminals clean."

"I never seen that in no instruction book," said Larry.

"Probably not," admitted Pop. "But even if you had read 'em, you wouldn't have remembered it long."

"Oh," said Larry. "This is just one of them Pop O'Neill inspirations."

"I wouldn't say that. I've seen it happen before on an old battery."

"We're only young fellows," said Larry.

"And I'm old, eh? Well, there's an awful lot of empty space under some gray hair. What this repair business takes is a little savvy, some common sense, and an open mind. But," he added hastily, "don't bother openin' yours. It'd be a shame to break that hermetic seal."

Tough U.S. Axles

There's a type and size for nearly every car and truck in America. At Jobber's.

Write for free bulletin listing U. S. heavy duty replacement axles for Army Surplus trucks. The U. S. Axle Co., Inc. Pottstown, Pa.

Perfect Circle Appoints Hopkins to Sales Post

Perfect Circle Sales Manager J. C. Hamilton announces that Arthur Hopkins has been appointed as an Assistant Sales Manager on the Corporation's sales staff. Hopkins, formerly Perfect Circle Regional Manager in the northeastern states, will be responsible for much of the field work.

Gordon Murray remains as Assistant Sales Manager, confining his activites to the inside operations of the staff.

Kenneth Sloane, formerly Perfect Circle District Manager in New York City, will replace Hopkins as Regional Manager.

"I've got more to do than clean your tie every time a spot of grease falls on it."

CAN'T ROT!

AC'S EXCLUSIVE GLASS CLOTH COLLECTOR TUBE TRAP PREVENTS POLLUTION OF THE OIL STREAM

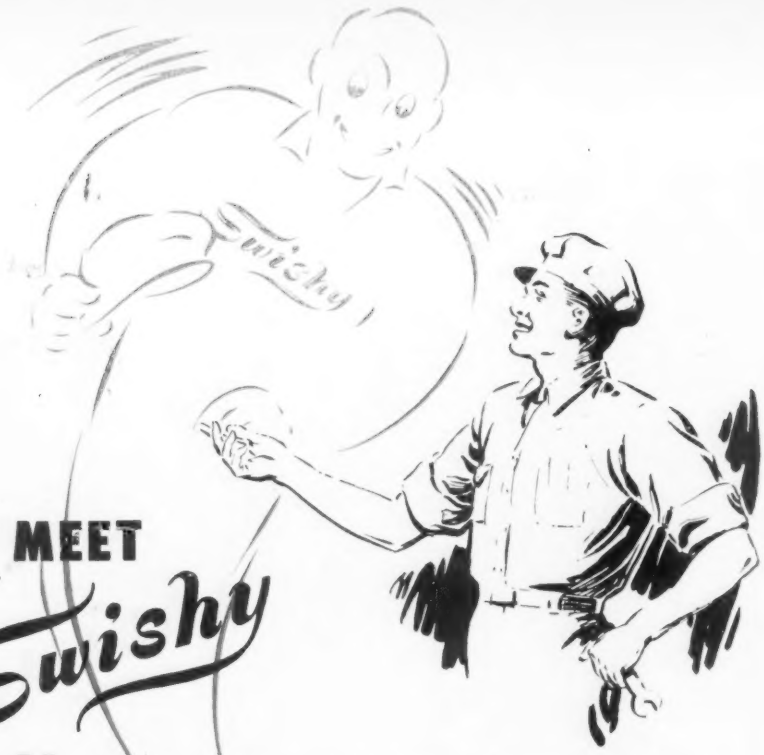
Only AC gives you this powerful sales feature —the glass cloth Collector Tube Trap. It is not harmed by acids in the engine oil—it can't rot and thus allow pollution of the oil. And it filters the oil a second time, just as it enters the Collector Tube.

That's the kind of extra protection you find throughout AC "5-Star Quality" Oil Filters and Elements—better design—stronger construction—finer quality—10 powerful sales features in all.

Join the Big National Campaign

All dealers who have tied in with the AC "5-Star Quality" campaign are enjoying big sales increases. Ask your AC wholesaler what it means in extra profits for you. There's a "5-Star Quality" Oil Filter for nearly every make of engine—and a better Replacement Element for nearly every make of oil filter.

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION



MEET

Swishy

NOBODY sees him, nobody hears him—yet he's been around for years.

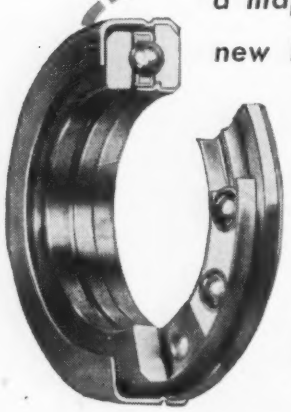
Swishy is swift, sure, smooth, silent car and truck performance.

When the first BCA Ball Bearing was put to work, fifty years ago, Swishy came into his own.

Since then he's worked on so many makes and models of both new and used cars and trucks that most of us take this superior service for granted.

HE'LL TELL YOU:

When you rebuild a clutch or do a major overhaul, always include new BCA Bearings as protection against comebacks.



When you buy bearings, look for the Jobber displaying Swishy and always ask for BCA Ball Bearings.

LOOK FOR *Swishy* **ON DISPLAY**

ALWAYS ASK FOR BCA

BCA RADIAL-THRUSTS CONTACT-TOUCH **BALL BEARINGS**

Bearings Company of America, Lancaster, Pa.

Carbauh Appointed Sales Manager of Titeflex, Inc.

Robert E. Carbauh has been named sales manager of a new department for the development and promotion of fire control equipment by Titeflex, Inc., Newark, N. J., according to a recent announcement by Elbert E. Husted, president. Among the products the new department will handle are fire resistant fuel lines made from the new Titeflex inconel flexible tubing.

Other Titeflex products include all-metal flexible tubing, radio shielding for aircraft or automotive ignition systems, flexible radar connections, and industrial filters.

Standard Motor Products Purchases Hygrade Co.

Hygrade Products Company, Inc., 3535 35th Street, Long Island City, N. Y., manufacturer of automotive parts, has been purchased by Standard Motors Products, Inc., also of Long Island City. The announcement was made by E. Fife, president of Standard.

Although Hygrade will be operated as a separate plant, Standard Motors will immediately institute their selling and distribution policy in this organization. The Three-Man Territory System, used in merchandising Standard's ignition lines, will be applied to the products Hygrade manufactures: fuel pumps, "contain-all" kits for fuel pumps and carburetors, gasoline filters, speedometer cables and shock absorbers.

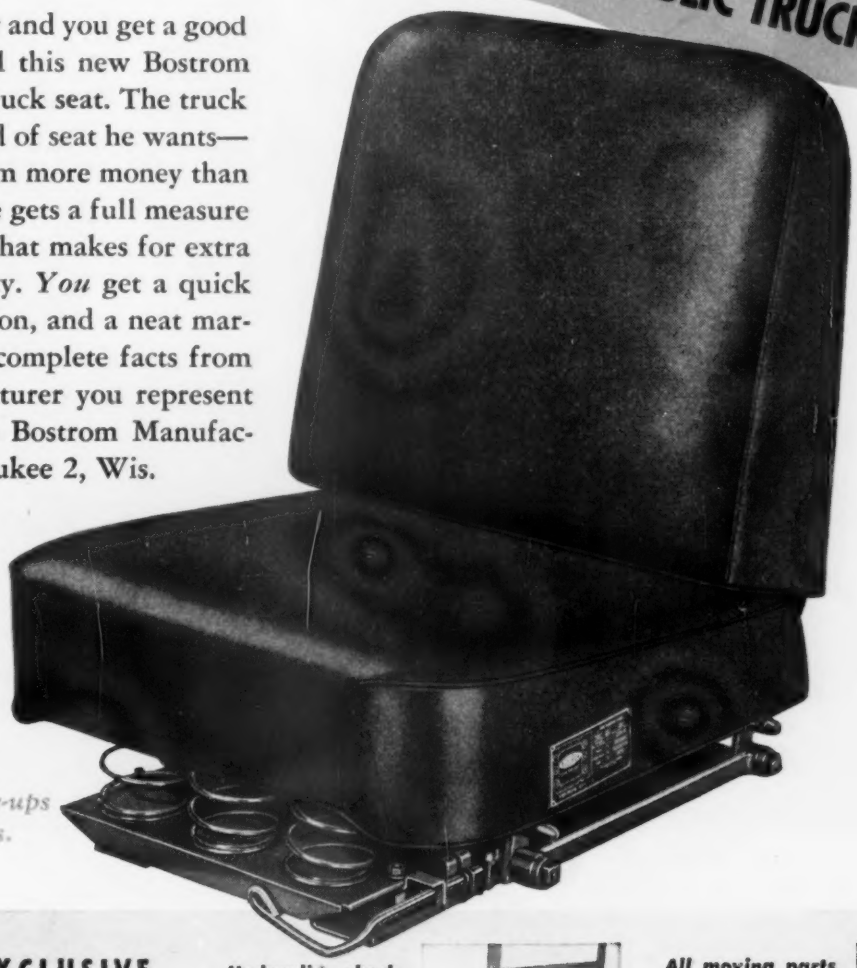
"Yeah, but look at the advantages. Never have to wind your watch."

Here's the Seat Truck Owners Are Asking About

NEW NO. 47
BOSTROM
HYDRAULIC TRUCK SEAT

- **ELIMINATES SEAT REPAIR BILLS**
- **PROVIDES SAFETY AND COMFORT**
- **FITS RIGHT OVER THE GAS TANK**

Both your customer and you get a good deal when you sell this new Bostrom No. 47 hydraulic truck seat. The truck owner gets the kind of seat he wants—a seat that saves him more money than it costs. Besides, he gets a full measure of driver comfort that makes for extra safety and efficiency. *You* get a quick sale, easy installation, and a neat margin of profit. Get complete facts from the truck manufacturer you represent or write direct to Bostrom Manufacturing Co., Milwaukee 2, Wis.

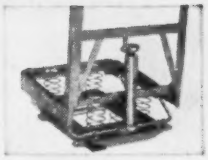


No more truck lay-ups for seat repairs.

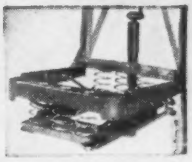
No more costly upholstery jobs.

NOTE THE EXCLUSIVE FEATURES OF THE BOSTROM NO. 47

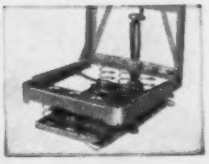
Hydraulic shock absorber takes the jolts instead of the driver. Prevents fabric wear.



All moving parts of suspension mechanism move in rubber. Nothing to wear out. No oiling.

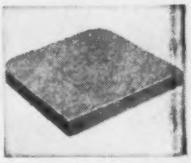


Durable frame for heavy duty use fits right over the gas tank. Has fore and aft adjuster.



Original seat coverings outlast ordinary cushions 6 to 1. Can be replaced at low cost in 10 minutes.

No coil springs to damage fabrics. Three inch bonded rubber pad lasts a lifetime.



For Genuine Quality

N·A·P·A

National Automotive Parts Association

Assurance of Quality

*

For Genuine Service

*Every part which bears the NAPA Seal must equal or surpass in quality the part it replaces.

NATIONAL AUTOMOTIVE PARTS ASSOCIATION • DETROIT 1, MICHIGAN

Your NAPA Jobber is a Good Man to Know!

Your NAPA Jobber is part of the most highly organized and most comprehensive parts service in the industry . . . He is geared to meet your needs on parts and supplies for cars and trucks of all makes . . . This is his only purpose. And because his success is completely allied with yours, you can always rely on his complete cooperation.

NAPA *is the largest Independent Parts Organization in the Industry!*

N·A·P·A
National Automotive Parts Association
Assurance of Quality

DITTMER TRANSMISSION GEARS
Allied WISCONSIN PISTONS · SLEEVES
UNITED PARTS FUEL PUMP HYDRAULIC BRAKE SPEEDOMETER and BRAKE CABLES
Monmouth ENGINE BEARINGS CLUTCH PLATES & PARTS CHASSIS PARTS
TRICO VACUUM OPERATED SAFETY PRODUCTS
Allied GRAPHO WATER PUMPS PARTS · PACKING
BROWN LIPE GEAR BOXES
American Brakeblok BRAKE LINING · CLUTCH FACINGS FAN BELTS · RADIATOR HOSE
Buffalo MUFFLERS
MicroTest GEARS · AXLE SHAFTS
Allied A.P.C. VALVES
STANDARD GREASE RETAINERS
DETROIT UNIVERSAL JOINTS
BALKAMP PARTS FOR FORD CHEVROLET · PLYMOUTH AND ALL POPULAR CARS
CELORON TIMING GEARS
BRIGGS SHOCK ABSORBERS
Allied RAYMOND VALVE SPRINGS
RARITAN ROLLER BEARINGS
ECHLIN IGNITION PARTS
BUFFALO FIRE EXTINGUISHERS
Allied PRECISION PISTON PINS
DUCKWORTH TIMING CHAINS
PURITAN
MARTIN-SENOUR AUTOMOTIVE FINISHES
Belden WIRE AND CABLE
New Britain HAND TOOLS
FEDERAL BALL BEARINGS
Spicer UNIVERSAL JOINTS

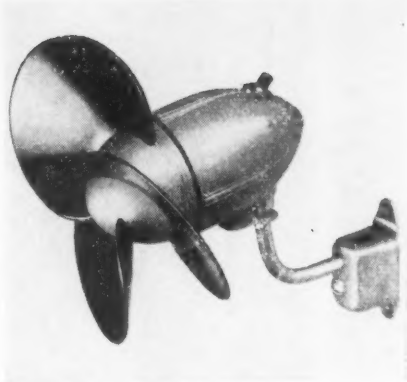
61

Electroline Manufacturing Co. has begun production on a fog light which is made of die cast parts throughout. According to the manufacturer, the elimination of riveted or welded parts enable this light to stand up under the most rugged use. It is chromium plated and is equipped with a universal mounting. Mazda No. 4015 Sealed Beam Unit is utilized in this light. It can be installed on all cars.

(For further information use coupon on p. 53)

62

Wittie Manufacturing & Sales Co. are again producing the Wit-eez Auto Fan. This product is described by the manufacturer as providing clear full driving vision in the winter by defrosting windshield and windows, as well as circulating warmth to rear riders. In the summer, the fan cools driver and occupants, and ventilates without the necessity for wide open windows. It is controlled by a specially designed positive action switch



and an interchangeable band or clamp bracket insures any type of installation including steering column in all cars.

(For further information see coupon on p. 53)

63

Lyon Incorporated has augmented its line with the new Lyon Stainless Steel Wheel Cover. This unit is manufactured entirely of stainless steel and has a buffed and polished finish.

It is manufactured in two sizes to fit all 15 and 16 in. wheels. It is available at present through the same group of rubber and oil companies who have distributed the Lyon Whitewalls.

(For further information use coupon on p. 53)

(Continued on page 130)

GATKE GROOVES give you Business-Winning EXTRA VALUE

Extra Value at No Extra Cost

The famous GATKE Grooves eliminate dust, dirt, moisture and other extraneous matter.

The Grooves keep surfaces clean, assuring perfect contact between brake lining and drum for uniform pedal response.

The Grooves induce air cooling and more quickly restore the effectiveness of wet brakes.

The Grooves are visible evidence of mechanical superiority you can show to brake reline prospects, thereby demonstrating why your Grooved Brake Relines are better.

Mechanical superiority car owners can see, plus performance advantages no other brake lining can offer—*all made possible by the exclusive GATKE Diagonal Grooves and the renowned quality of GATKE DURA-BLOK.*

When you point out the Grooves a *car owner can see what you are talking about!* When you explain how the Grooves *eliminate extraneous matter and give better, smoother, surer braking contact, he wants it.*

When he drives away with a Grooved DURA-BLOK reline, you can bet he'll specify *"the Brake Lining with the Grooves"* for his next reline.

Ask your Jobber or write.

Gatke CUSTOM-BILT BRAKE LININGS

BLOCKS SETS ROLLS SHEETS

GATKE CORPORATION

236 N. La Salle St., Chicago 1, Ill.

"I can't make the payment this month. My wife squandered the money on groceries."

Genuine FORD PACKAGED REPAIR KITS

Get and Keep Ford Service Business

GENUINE FORD WATER PUMP REPAIR KIT
Complete with every part needed to restore old water pump to new efficiency . . . cadmium-plated impeller retards corrosion . . . rustless steel shaft . . . spring-backed seal automatically compensates for wear.

Here's Why:

1 **Naturally, Genuine Ford Parts are best for Ford cars and trucks. They're the parts that are made right to fit right and last longer!**

2 **By providing for installing parts in groups, Genuine Ford Packaged Repair Kits help to build more dollar volume per service order.**

3 **With Genuine Ford Packaged Repair Kits, each kit is *complete*—no more chance of delays due to missing items, no patching.**

GENUINE Ford PARTS

For faster, better Ford service jobs—for *more* satisfied Ford owners—order your Genuine Ford Packaged Repair Kits from your Ford Dealer or Ford Parts Distributor *now!* There's one near you!

Now Available . . .

FUEL PUMP KITS . . . WATER PUMP KITS . . . SPINDLE BOLT AND BUSHING KITS . . . CONNECTING ROD BEARING KITS . . . UNIVERSAL JOINT KITS . . . AND MANY OTHERS—ALL GENUINE FORD PARTS

F O R D M O T O R C O M P A N Y

OTHER FAMOUS AUSCO JACKS:

Ausco Hydraulic Floor Jacks. 2-4 ton models.

Ausco Hydraulic Axle Jacks. 1½-3-5-8-12 ton models.

Ausco Hydraulic Bumper Jacks. 1½ ton model.

Ausco Mechanical Axle Jacks. 1-1½-2 ton models.

Ausco Friction Bumper Jacks. 1 ton model.

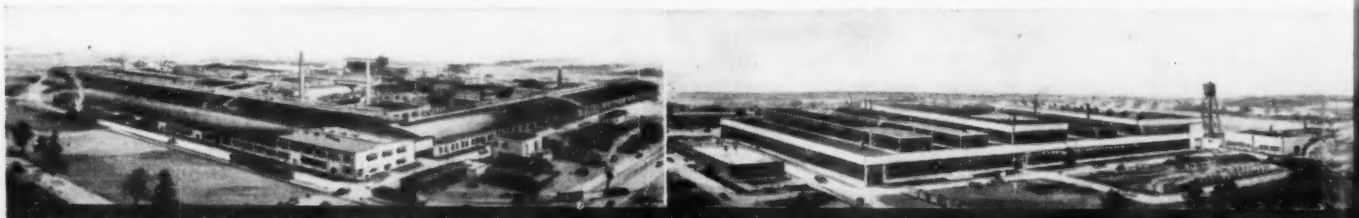
Ausco Ratchet Bumper Jacks. 1 ton model.

Ausco Body Repair Tools.

Ausco Steel Horses 2-7 ton models. 12"-15"-18" sizes.

Ausco Hydraulic Oil; perfect for all hydraulic jacks.

- Big, sturdy, slip-proof saddle.
- Fully enclosed mechanism.
- Safety valve to prevent overloading.
- Four bolts release power unit.
- Removable handle.
- Free moving swivel wheels.
- Handle rests in vertical position.
- One-piece malleable iron frame prevents springing.
- Ausco Service Stations conveniently located throughout the United States.



"OVER 30 YEARS' EXPERIENCE IN FINE JACK BUILDING!"

up a Chair...

let's talk about Ausco JACKS!

Ausco's are Built to YOUR Job Specifications! Everything you could ask for in a curb jack is built into the *new Ausco Hydraulic Curb Jack.* It's extra rugged to take years of hard wear... the power unit is fully enclosed for protection against life-cutting dirt. Large, free-moving swivel wheels permit instant "spotting", and it raises a ton-and-a-half car up to 18½ inches, quickly and easily . . . a turn of the handle lowers it at the speed you want. The power unit is easily removed for quick servicing. There are no exposed springs to snap or snag. Write TODAY for full details on this and other Ausco Jacks! Auto Specialties Mfg. Co., St. Joseph, Michigan, Windsor, Ont., Canada.

AUSCO Jacks

*FULLY PATENTED, Ausco Trademark Reg. U. S. Pat. Off.

G-2610

FACTORIES: St. Joseph, Michigan; Benton Harbor, Michigan; Hartford, Michigan; Windsor, Ontario, Canada

64

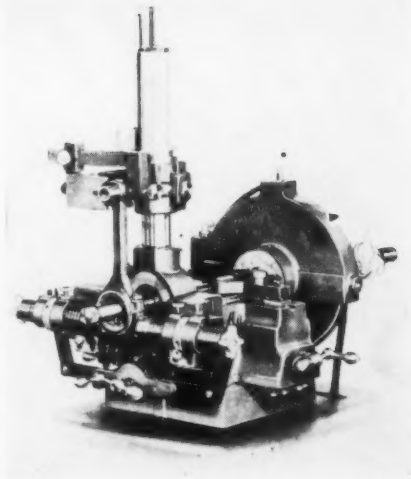
American Hammered Piston Ring Division of the Koppers Company has announced that all compression rings in their line are to be made of a new type of metal. Known as F-88 High Strength Iron, it is a centrifugal casting of a special formula developed by American Hammered. According to the manufacturer this metal is two and one half times stronger than ordinary piston ring iron and it is unbreakable in service and has a high modulus of elasticity. For heavy duty engines, this development is being combined with the porous chrome plating which was originated by the company early in the war and first made available for bus and truck engines about a year ago.

(For further information use coupon on p. 53)

65

Tobin-Arp Manufacturing Company has added two new models to its line, the Model RA Con-Rod Attachment and the Multiple Ring Installing Machine. The Con-Rod Attachment is designed to be mounted on the Tobin-Arp Model SB machine, or attached and supplied with a new machine. It renders a complete bearing finishing service. It handles all types of bearings on both mains and rods, and resizes, faces or fillets all types of individual bearing inserts. It finishes all rods, both insert type and rough cast-in type, square and parallel to piston pin. The Ring Installing machine expands all the rings at once and permits the piston to be slipped into place. Ring bars for any pistons are available with this unit.

(For further information use coupon on p. 53)



66

Landis Tool Co. is producing a 6 in. type CH Plain Hydraulic Grinder for low cost mass production of small ground parts such as, bearings, small armatures, roller bearing rings, etc. Selection of the proper speed and type of grinding wheel will produce either roughing cuts or fine finishes. Shoulders and special shapes can be ground by forming the wheel. Features of this unit are Microsphere Wheel Spindle Bearings, Dynamic Balance, Annealed Castings, and Hydraulic Table Traverse.

(For further information use coupon on p. 53)

(Continued on page 134)

Dependable
..thru the Years!

Continuous Service Wins Leadership

● You can't stay out in front thru the years unless you deliver.

Wheel weight manufacturers come and go, but because D & T *Engineered* Wheel Weights have continued to deliver *extra* value made possible only by long experience, they have won leadership.

Other wheel weights may look like them . . . but . . . the *difference* is in performance!

Turner Manufacturing Company
KOKOMO 2, INDIANA, U.S.A.

"Going down."

Motor Jewels

IN the finest precision timepiece, jeweled bearings, made to the precision standards specified by timepiece engineers, are used to insure accuracy and performance.

In modern automobile engines likewise, the leading automotive engineers carefully specify bearings made to exact precision limits as necessary to insure accurate and fine performance.

Monmouth Replacement Bearings are made to the exact precision limits specified by car builder engineers—because it is only by the use of such bearings that continued satisfactory performance for reconditioned engines can be obtained.

Specify "Monmouth" Bearings—they meet the specifications of the men who know motors best.

NAPA Assurance of Quality

Your NAPA Jobber is a Good Man to Know!

MONMOUTH PRODUCTS COMPANY • CLEVELAND 3, OHIO

FOR ENGINE BEARINGS
CLUTCH PLATES AND PARTS
CHASSIS PARTS

Monmouth Trade Mark *is the name*

AMAZING *New!*

OZONEr

Freshens the air in

garages repair shops motor testing rooms

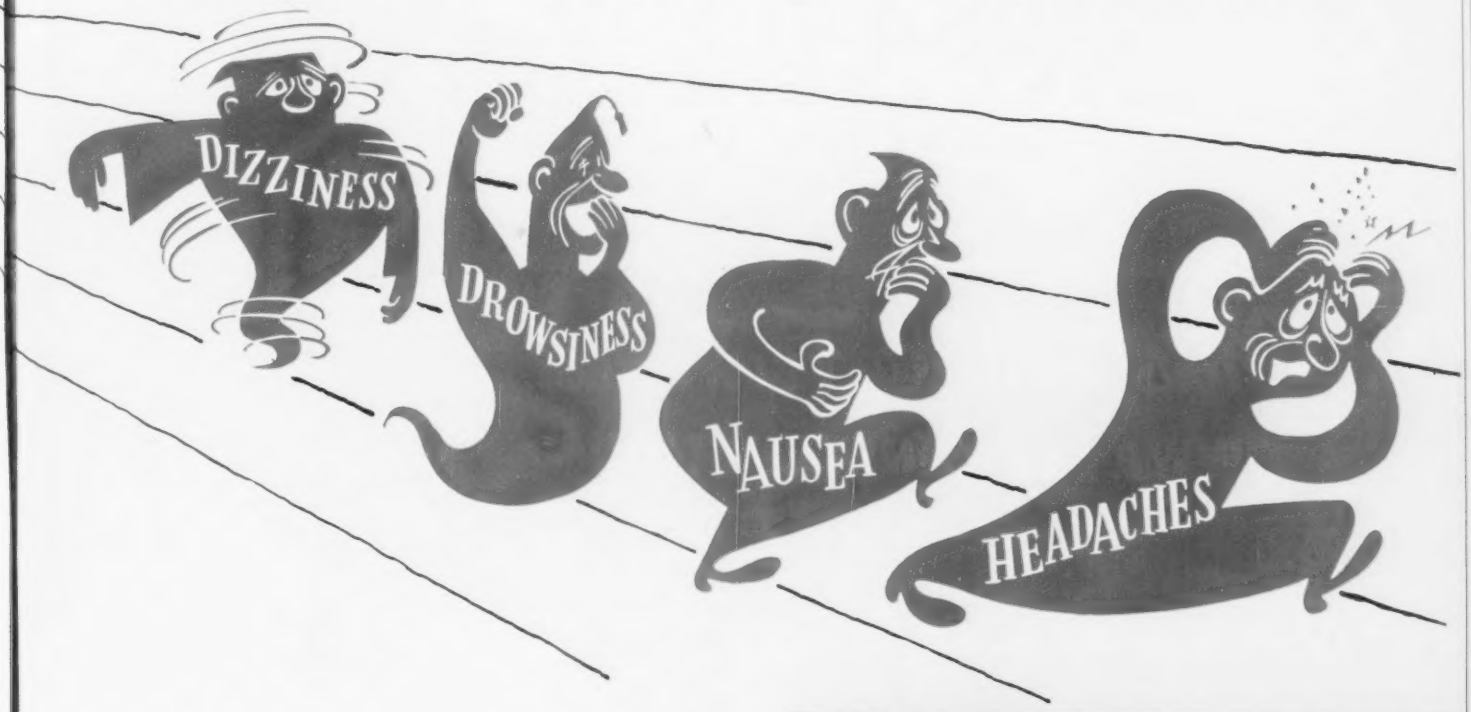
- BETTER HEALTH
- MORE EFFICIENCY
- LOWER FUEL COSTS

CAN BE SECURED THROUGH LEADING AUTOMOTIVE WHOLESALERS

AMERICAN ASSOCIATES, INC.
AUTOMOTIVE PRODUCTS DIVISION
PROVIDENCE 3, R. I.

NATIONAL SALES OFFICE:
1728-30 FAIRMOUNT AVENUE
PHILADELPHIA 30, PA.

DRIVE OFF THESE ENEMIES OF HEALTH and EFFICIENCY!



HERE'S the scientific way to protect the health, happiness and efficiency of men in your employ. This amazing new "amOZONer", by keeping air purer—fresher—healthier—helps to prevent headaches, dizziness, drowsiness, nausea and other ill effects frequently suffered by mechanics, garage attendants and others working around internal combustion engines in enclosed places.

Installed seven feet off the ground, it will clear the atmosphere up to 6,000 square feet of floor space.

Because the "amOZONer" produces ozone and circulates it in the atmosphere, the air the men breathe is fresher—more invigorating.

ECONOMICAL TO OPERATE
EASY TO SERVICE

Clean and service the "amOZONer" in less than 10 minutes . . . only 3 times a year

Absolutely Safe
No Tools Required

Five easy steps are all you need to clean and service it. Anyone can do it. The entire generating unit slides out of the cabinet like a desk drawer. It is light in weight and can easily be carried to bench or table.

67

Bowser, Inc., has scheduled for 1948 production a new low gasoline dispensing pump with low reach hose device that simplifies maintenance features. The trade name "Rol-Way," denotes the rolling action of the pump hose withdrawal and retraction device. The pump is 57½ in. high and serves a radius of 13½ ft. The hose device operates throughout on a series of roller bearings to minimize operational effort when extra hose is needed for long reach fills. When the electrical switch is operated to start the pump, it actuates a pawl which automatically holds the extra hose at any point to which it is withdrawn.

(For further information use coupon on p. 53)

68

S. G. Taylor Chain Co. is now in production of a new tire chain end fastener to be used as standard equipment on truck and passenger car tire chains. This fastener can be locked in position with one hand and is designed to prevent mud, snow and ice from clogging it shut when chains are being removed. Taylor Made tire chains are manufactured for dual or single wheels in twist link or bar reinforced types.

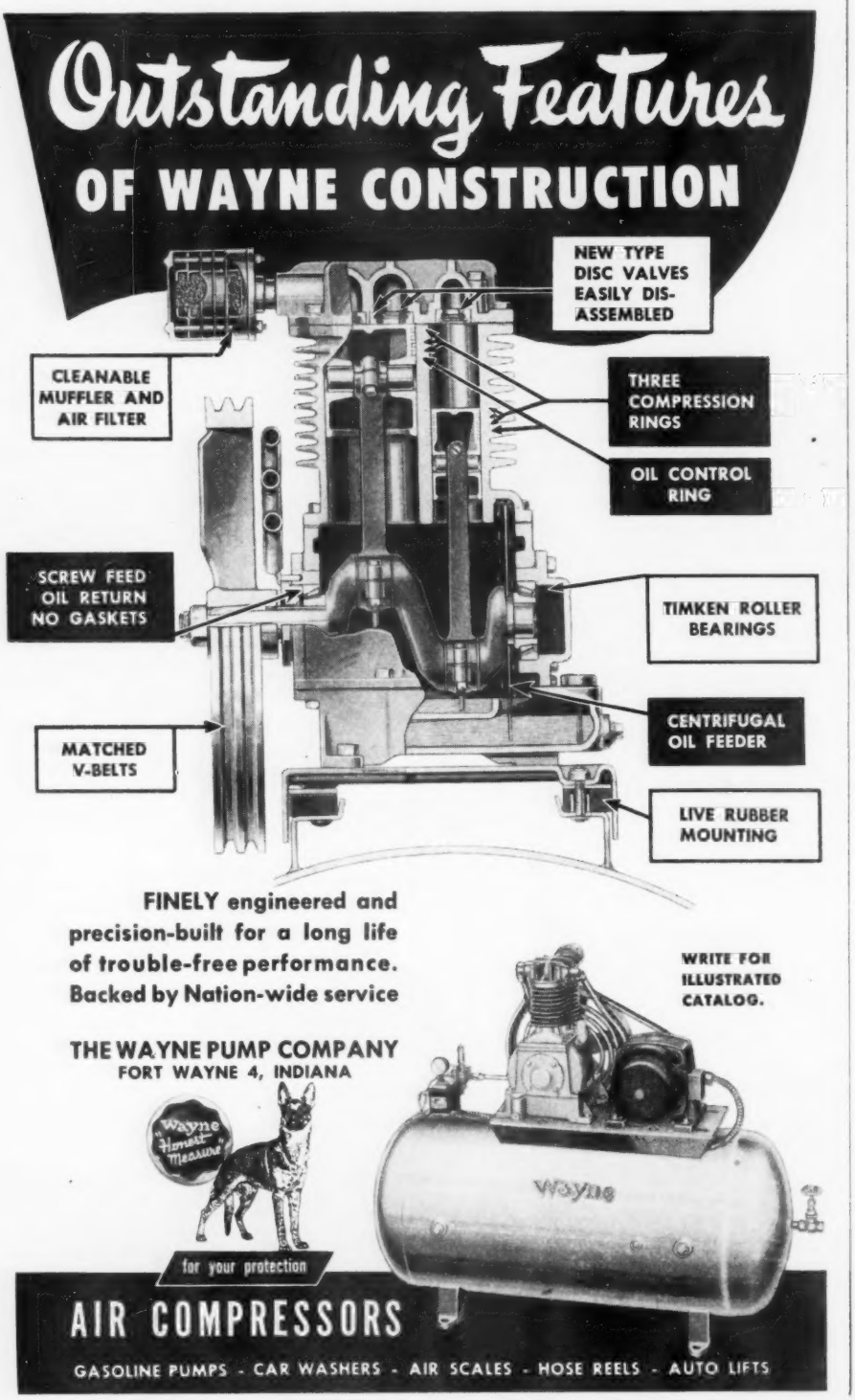
(For further information use coupon on p. 53)

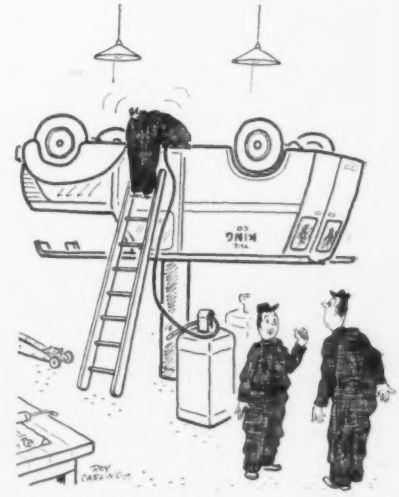
69

Sure-Rite Products Company are featuring their line of Windshield Wiper Hose, which they described as being made of the finest 2-ply rubber obtainable (not synthetic). It is the braided type and comes packaged in 50 Ft. Roll Spools and 7½ Ft. Rolls. Diameters are 3/16 in. to ¼ in.

(For further information use coupon on p. 53)

(Continued on page 138)





"Walt said he likes to see what he's doing."

HERE
is a better Piston

Announcing A SEALED POWER SLEEVE ASSEMBLY FOR CUMMINS DIESEL FEATURING THE NEW FORGED ALUMINUM PISTON

As compared with a cast aluminum piston of the same alloy, this new Sealed Power LO-EX* Alloy FORGED ALUMINUM PISTON has:

37% greater tensile strength

and it has 39% greater yield strength

and it has 16 times greater elongation strength—for longer life

and it has 15% greater thermal conductivity —for cooler operation

and it has 60% better fatigue (flexing) strength

Blowholes, porosity and shrinks, all of which can detract from the factor of strength and quality in any piston casting, cannot occur in Sealed Power Forged Aluminum Pistons, due to the method of fabrication.

For maximum performance insist on SEALED POWER SLEEVE ASSEMBLIES FEATURING LO-EX ALLOY FORGED ALUMINUM PISTONS FOR CUMMINS DIESEL ENGINES.

*A trademark for pistons cast and alloys produced exclusively by The Aluminum Co. of America.

SEALED POWER CORPORATION

MUSKEGON, MICHIGAN • IN CANADA: STRATFORD, ONTARIO

NEW FRAM CONTEST

for Dealers Only

AND FRAM HELPS YOU WIN SALES WITH ADS, POSTERS, SALES HELPS!

FREE MONTHLY POSTER SERVICE

Every month Fram sends you timely attention-getting window posters that tie-in with Fram's national advertising . . . help you turn that advertising into sales!

BIG ADS EVERY MONTH

Every month — in *The Saturday Evening Post* — Fram runs big, colorful ads to win customers for *you!*

OTHER SALES HELPS . . . In addition, Fram gives you other powerful sales helps: Multiple Sales Banners . . . Biolite Signs . . . New Products Merchandisers . . . Colorful Display Pieces!

$2,000 IN PRIZES GIVEN EACH MONTH!

Simple Rules!

Easy to Win!

$1,000 FIRST PRIZE

Here's your chance to win a $1,000 first prize . . . or one of 48 other big prizes . . . in an easy, monthly contest that's open to FRAM DEALERS ONLY! Rules are simple. Each month, starting at once, Fram sends you a striking window poster. This poster reproduces Fram's current advertisement from *The Saturday Evening Post*. And, with each poster, you receive not one but *three* entry blanks. All you have to do is *read* the ad reproduced on the poster . . . and complete the statement on the entry blank.

Remember, every Fram Dealer will receive a special poster-mailing, with three entry blanks, each month. All contest rules are given there. If your poster-mailing doesn't arrive, write at once, and we'll supply a duplicate! Address: Fram Corporation, Providence 16, R. I. *In Canada:* J. C. Adams Co., Ltd., Toronto, Ontario.

FRAM *Oil·Air Gas* FILTERS

Introducing
TWO GREAT NEW FRAM PRODUCTS

NEW FRAM GASOLINE FILTER really *removes* solids and water from gasoline. Four tailor-made models service 85% of all cars and light trucks . . . one *replacement cartridge* fits all models and can be changed *while car is being gassed.*

NEW FRAM CRANKCASE AIR FILTER replaces conventional breather caps . . . can be easily installed *while car is being gassed* . . . protects engine where MOST dirt enters. Three adaptors fit most oil filler pipes. Three sizes of *replacement cartridges*, for all operating conditions, fit all adaptors.

FAMOUS FRAM FILCRON OIL FILTER—the largest selling automotive oil filter—brings you plenty of repeat business on genuine Fram Replacement Cartridges! Over 8,500,000 Fram filters are now in use. Each requires a minimum of two replacement cartridges a year!

Mail this Coupon today!

FRAM CORP., Dept. MA ; Providence 16, R. I.

I'd like to be a registered Fram Dealer so I can participate in the big Fram Prize Contest. Please have a jobber salesman call on me with complete information.

NAME .....

ADDRESS .....

CITY ..... **STATE** .....

SOMETHING EXTRA

IN BRAKE SERVICE, TOO

FLUSH AND FILL

Here's a service that means an extra measure of safety for your customer and an extra sale and profit for you.

The need for flushing out the old, gummy, dangerously dirty brake fluid is as understandable to your customer as is the need for a crank case draining. And Puritan Hydraulic Brake Flushing Fluid does a thorough, efficient job and does is quickly and easily.

Then a refill with long-lasting, non-gumming Puritan Hydraulic Brake Fluid gives your customer a responsive brake pedal and eliminates possibility of brake failure due to overworked, sluggish brake fluid.

These two Puritan quality products enable you to give superior service, to "trade up" your customer to a bigger sale and to net more profit for you. Be sure you have a supply of these Puritan products available at all times. Get a supply from your N.A.P.A. jobber today.

FLUSH AND FILL FOR . . . . BRAKE SAFETY

1. Clean hydraulic brake line with fast-acting Puritan Hydraulic Brake Flushing Fluid.

2. Refill with non-gumming, all-"miscible" Puritan Hydraulic Brake Fluid.

135 YEARS OF CHEMISTRY FOR TRANSPORTATION

PURITAN COMPANY, INC.

ROCHESTER 6, NEW YORK

HYDRAULIC BRAKE FLUID AND FLUSHING FLUID • GASKA-SEAL NO. 1, 2 AND 3 SHOCK AND KNEE-ACTION OIL

NAPA Assurance of Quality

New Products

(*Continued from page* 134)

70

World Bestos Corporation is featuring its truck and bus brake linings. According to the manufacturer this part of the line is engineered with a number of differing formulas so that

the exact operating characteristics for the specific brake or even the individual brake shoe concerned is called for in the standard World Bestos specification. This heavy duty line consists of the engineered drilled sets called Prescribed Friction sets, master segments known as Group Blocks and drilled brake blocks.

(For further information use coupon on p. 53)

71

Tru-Auto Parts Co. has introduced the "Grip-Tite Invisible" Wheel Balance Weight. Available in a large selection of sizes, these weights are so designed as to be invisible when in position on the rim of the wheel.

(For further information use coupon on p. 53)

72

Aluminum Company of America has developed a wheel testing machine described by them as capable of performing tests that closely approach road conditions encountered by heavy duty vehicles in service. Wheel assemblies are held in place on the machine by twelve clamps bolted to a one thousand pound faceplate. Controlled speeds are made possible by an electric motor that drives the flywheel and faceplate unit. Loads simulating weight carried by vehicles in service, are exerted on the wheel assembly by a steel shaft anchored to a calibrated spring. Electronic controls indicate deformation while the machine rotates the wheel assembly.

(For further information use coupon on p. 53)

(*Continued on page* 140)

LESS LABOR—MORE PROFITS

John BEAN FOOLPROOF BALANCING

JOHN BEAN balancing is precise, speedy . . . trial and error fumbling eliminated. Wheels must be removed for accurate balancing. Extra profits in checking brake linings, bearings, steering parts. Ask your John Bean Jobber or Write JOHN BEAN MFG. CO., *Div. Food Machinery Corp.*, LANSING 4, MICH.

WHEEL ALIGNERS AND CORRECTION TOOLS . . . WHEEL BALANCERS AND BALANCING TOOLS . . . WEIGHTS . . . STEAM CLEANERS . . . CAR WASHERS

New Products . . . . . (*Continued from page* 138)

73

Lynn Products Co. is producing a Spring Spreader with a specially designed reversible ratchet for handling both front and rear springs on all Fords from 1928 Model A to the current cars. Two threaded shafts, one with left hand thread and one with right hand thread, are moved out for equal distances by each turn of the ratchet located at the center of the tool. This ratchet enables the user to work with continuous motion and can be reversed by turning the pin of the ratchet head. Rated capacity is over 3 tons pushing power. It is furnished complete with ratchet handle.

(For further information see coupon on p. 53)

74

F & B Manufacturing Co. has introduced a special Filko "Quick-Stock" Ignition Parts Assortment designed for service stations. An all-metal, two-drawer Filko "Quick-Stock" Cabinet is furnished without extra charge to service stations buying Special Filko Assortment. This assortment contains 66 Filko Ignition Parts for servicing practically all cars on the road today. The Filko announcement states that service stations using the new assortment will be given a special discount on all Filko Replacement Parts ordered for the "Quick-Stock" Cabinet.

(For further information see coupon on p. 53)

75

U. S. Industrial Chemicals, Inc. is featuring its Super Pyro Anti-Freeze. Recently introduced to the automotive trade Super Pyro is formulated, according to the manufacturer, to fill

every requirement of the modern cooling system. It is also described as being able to prevent rust and corrosion of metals in the cooling system and damage to rubber hose connections. It will not leak or creep out of any cooling system tight enough to hold water.

(For further information see coupon on p. 53)

(*Continued on page* 142)

THESE five modern plants, equipped with complete engineering departments and latest type production machines, comprise the manufacturing facilities of the Lynch Corporation, manufacturers of Par Air Compressors. Our many years of experience in the development and manufacture of precision machinery is transmitted into every Par unit. We ask you to compare before you buy, for by comparison—you'll buy Par. Specially designed for automotive service, you can depend on Par for years of economical, trouble-free service. For complete details on the Par line, see your Par Jobber or write for Par Catalog.

By Comparison — You'll Buy PAR

LYNCH CORPORATION

Par Compressor Division TOLEDO 1, OHIO U.S.A.

"No wonder I couldn't put my shoes on this morning."

CASH-IN on the SAFETY DEMAND for HEADLIGHT TESTING!

with the tester that brings BIG EXTRA PROFITS

Here is an opportunity to increase your business, add to your reputation as Safety Headquarters, and bring in BIG EXTRA PROFITS. Millions of cars on the road today are over 6 to 10 years old. More than 60% need headlight repair and adjustment. You can make BIG PROFITS because accurate testing is done FAST on the Bear "555" Headlight Tester. You make even BIGGER PROFITS on the tie-in sales of bulbs, sealed beam units, batteries and wiring jobs. You create customer good-will and keep *profitable work in your shop*. No need to risk losing customers through their going elsewhere.

Thousands of satisfied users will tell you the Bear "555" Headlight Tester gives years of dependable, trouble-free service, and brings in BIG EXTRA PROFITS year after year. See your Bear Jobber TODAY, or write direct to: BEAR MFG. CO., Dept. M-1, Rock Island, Illinois.

NATIONALLY ADVERTISED BEAR SIGN!
Another BIG EXTRA you get only with Bear. An EXTRA FEATURE that attracts new business constantly.

CHECK THESE BIG EXTRA FEATURES

- **1** Sensitive photo-electric cell shows candlepower rating on large, easy-to-read scale.
- **2** Graduated screen shows beam pattern even in broad daylight.
- **3** Exact aim of headlight is clearly shown by lateral aim scale.
- **4** Special, precision-ground lens is directly in front of headlight during test.
- **5** All readings on aim, beam pattern and power are made from front.
- **6** Instantly adjustable for up-and-down setting and floor level.
- **7** Special focal pointer locates exact center of headlight quickly and easily.

BEAR
"DOES THE JOB RIGHT FROM START TO FINISH"

76

K-D Manufacturing Co. has added a new Valve Spring Lifter to their line of valve servicing tools. Particularly designed for servicing deep set, hard-to-get-at motors. This No. 700 Valve Spring Lifter is of deep offset design, especially adaptable to under-fender or under-manifold applications. A turning handwheel actuates a screw which raises and lowers upper jaws, providing automatic locking in any position. Jaws are adjustable by means of thumb screws and are correctly tempered for long service life.

(For further information see coupon on p. 53)

77

Joseph Weidenhoff Co. is featuring three units in its line. The first of these is the Model D-389 Combination Generator and Magneto Test Bench which can be used for complete testing and as a drive unit for

miscellaneous shop operations. Second is the Model D-372 Magnescope, a compact driving means for testing both base and flange-mounted type magnetos. The third item is the "Off-And-On" Model B-967 Puller Press for removing and replacing bearings, bushings, races, slip rings, end caps, Bendix drives and gear. This press combines the features of a quick-acting arbor and puller press.

(For further information see coupon on p. 53)

78

United States Electrical Tool Co. is featuring the new "Reddy" 6 inch Utility Bench Grinder. Powered by a ⅓ hp. capacitor type ball bearing motor, this unit is specifically designed for garages, small shops and general industrial use. It is equipped with one coarse and one fine abrasive wheel, size 6 in. x ¾ in. x ½ in. (6 in. solid center wire wheel can be furnished). The tool rests are ajustable to wheel wear. It is equipped with rubber feet and provisions for bolting to bench.

(For further information see coupon on p. 53)

(*Continued on page* 144)

QUICK TURNOVER!

Stocks that gather dust don't gather profits. A sure springboard to fast turnover is a complete stock of Schrader Products—particularly the New Display Packages of Caps, Cores and Gauges. Set up your Displays of the Schrader Products where they will be seen . . . and you'll make many extra sales—extra profits!

Schrader advertising in National Consumer, and Farm publications tells vehicle owners to "look for and buy from these Schrader Displays at your dealers." Tie in with this timely advertising for quicker turnover—order from your regular supplier today.

Sell a Schrader Gauge to Every Vehicle Owner

The Complete Line—ONE SOURCE ONE RESPONSIBILITY

Tire Valves, Valve Caps, Valve Cores, Tire Pressure Gauges, Chuck Gauges, Couplers, Blow Guns, Air Chucks, Vulcanizers, Service Tools, Hose Fittings, Spark Plug Pumps, Accessories.

Schrader
PRODUCTS
CONTROL THE AIR

A. SCHRADER'S SON • BROOKLYN 17, NEW YORK
Division of Scovill Manufacturing Company, Incorporated
Originators of the Comparative Air Loss System for Flat Tire Prevention

"Mr. Smith here is treasurer of our corporation."

Faithful guardian!

DAYTON FAN BELTS
NOW MADE WITH *Rayon*

When you install a Dayton Fan Belt, you can be sure of its service, sure of your customer's satisfaction. For good proof of Dayton's superiority, the next time you pick up a Dayton Belt, look closely at its sides. See the tough, flexible rubber *fortified with Raytex*—special Dayton process rayon cord. Only Dayton Fan Belts have this amazing open edge that shows you the detailed construction of the product. It is your assurance of the finest automotive engineering.

This outstanding service construction is the prime reason Daytons are known as The Original Equipment Fan Belts . . . the fan belt chosen as Original Equipment on 85% of all American makes of cars. If Daytons are not already your choice, for full details call your jobber, or write:

DAYTON RUBBER • DAYTON, OHIO

Dayton Rubber
REG. TRADE-MARK THE DAYTON RUBBER MFG. CO.
THE MARK OF TECHNICAL EXCELLENCE IN SYNTHETIC RUBBER

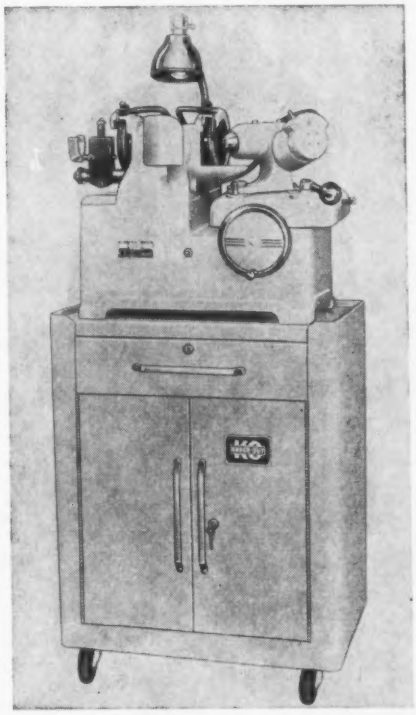
79

Hoof Products Co. has supplemented its line of metal and silent timing gears with the recently developed Hoof Aluminum-Steel Matched Timing Gear Set. The special alloy used in making the cam gear is described by the manufacturer as having unusual strength and bearing properties and is not affected by engine heat or subject to corrosion resulting from chemicals in lubricants. The Aluminum-Steel Gears are sold only in matched sets. The gears are crown shaved for accuracy with a finish similar to tooth grinding. A steel hub is permanently bonded to the aluminum gear and the tooth surface is coated with plastic for the protection of the gears before they are installed.

(For further information use coupon on p. 53)

80

K. O. Lee Co. have introduced a new Mobile Valve Shop and an improved Valve Refacer. The Valve Shop is available as a separate unit or in combination with any or all of the present Lee valve equipment, such as Valve Refacer, Valve Seat Grinder and Valve Reseater. The Valve Wagon has a large drawer, providing space for

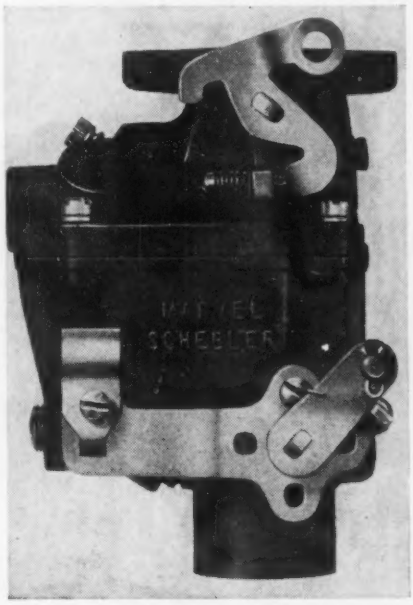


Valve Seat Grinder Parts, accessories and attachments. Featuring large cabinet space, it is mounted on large rubber wheels and has an electric inlet and two outlets.

(For further information use coupon on p. 53)

81

Marvel-Schebler Carbureter Division of Borg-Warner Corporation is featuring as its newest product its TSV carbureter. This carbureter has



recently been announced for agricultural and industrial purposes and is available in the ⅝-in. size. It is standard equipment with several tractor manufacturers.

(For further information use coupon on p. 53)

(Continued on page 146)

WIN WITH WELLS

Win Car Owner Preference with this

"Masterpiece in Metal"

Here is a Dealer Ignition Parts Merchandiser that "speaks right up" for increased "tune-up" work. Colorful! Commanding! A masterpiece in metal for beauty and utility. Designed for wall or counter display. Contains a well rounded, fast moving stock of Wells parts to service all three ignition systems. Keeps contents "under lock and key." "Win with Wells" is no mere catch phrase. Display Wells parts and use them for all your jobs to produce ever-increasing "tune-up" work.

WELLS MFG. CORPORATION FOND DU LAC, WISCONSIN

WELLS IGNITION

Quality Tells -- Demand WELLS

behind these great products...
a great
American scientist
• New, Quick-Cooling Aluminum Oxide Insulator with Wider Heat Range.
• Only an Edison has the Patented "SPUN-ON" Leakproof Gasket.
EDISON
MADE IN U.S.A.
EDISON
The New Edison "Extra Heavy Duty" Battery
The New Edison "AJ" Magneto
EDISON
Thomas A. Edison
Thomas A. Edison, Incorporated
Automotive Division
West Orange, New Jersey
You can always rely on an Edison

82

Homestead Valve Manufacturing Co. is now producing a new "Utility" Model Hypressure Jenny, an extra-heavy-duty all purpose steam cleaner. It is described by the manufacturer as featuring instant starting, simple welded unit construction, complete accessibility of all working parts, continuous electric spark ignition, non-clogging heating coil and simplified pressure-atomizing oil burner. This model will be available with either oil or natural gas burners and electric motor or gasoline engine drive.

(For further information use coupon on p. 53)

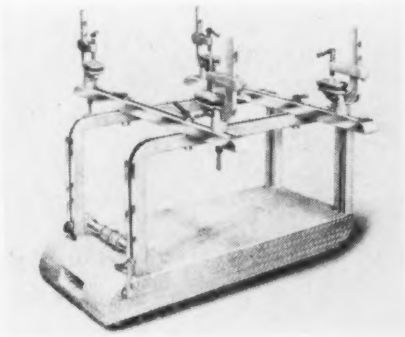
83

Oil-Dri Corp. has announced the marketing of "Uncle Nick's Car Wash," a new, fast action detergent in powder form. This car wash has been specially formulated for washing automobile finishes. According to the manufacturer it completely removes dirt, grit, grease and scum and is non-abrasive, non-acid and safe to the user's hands. No other soaps or polishes are needed for windows, chrome and tires. It may also be used for cleaning metal aids, dairy equipment, etc. It is being packaged in drums of 20, 40 and 55 lbs.

(For further information use coupon on p. 53)

84

H. K. Porter, Inc., is featuring two new Porter-Ferguson units, the 4-A and the 2-B Body Repair Units. The 2-B is a compact body repair unit for shops whose repair work is limited

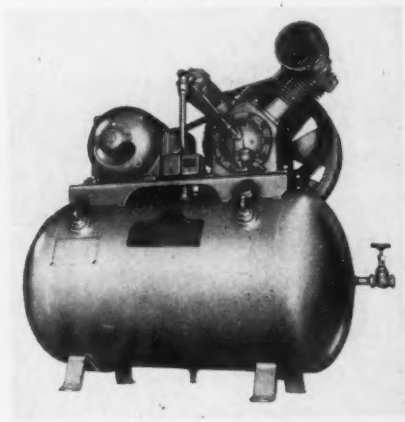


in scope or volume. It is powered with a 15,000 lb. Hydro-Method Remote Control Jack. The 4-A is a simplified version of the 5-A Master Unit and has two Hydro-Method Power Jacks, a 10,000 lb. Direct Action Jack and a 15,000 lb. Remote Control Body Jack. This unit in addition to the tools and appliances which make up the standard equipment is designed to accommodate the large shops and Arbor Press Unit K, or the more economical Unit U Utility Shop Press.

(For further information use coupon on p. 53)

85

Westinghouse Air Brake is featuring its "Y" line of air compressors. These compressors have force feed lubrication with unloading interlock, assuring lubrication to all moving parts before any working load is imposed.



Unless oil pressure is adequate the compressor will not deliver air. Thus, if the oil falls below a safe level the compressor signals the fact and oil can be added before damage is caused by dry running. These compressors are available for horizontal or vertical tank mounting.

(For further information use coupon on p. 53)

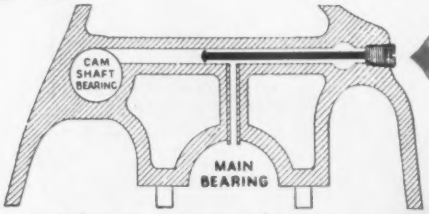
(Continued on page 150)

DON'T

GET CAUGHT WITH YOUR PRESSURE DOWN

correct it with

Thexton OIL PRESSURE REGULATORS for Chrysler-made cars



U. S. Patent No. 2,202,074
Canadian Patent No. 396,060

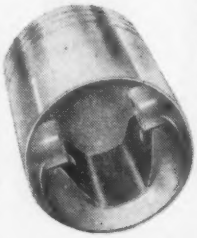
Excess oil escapes when wear occurs at the cam shaft bearing! This always reduces the pressure of the oil at the main, and consequently at the connecting rod bearings, too. Since the oil spray from the connecting rod bearings lubricates the cylinder walls and wrist pin bearings, it is very important that the oil pressure at these outlets be properly maintained. Insure every ring and bearing job by installing THEXTON OIL PRESSURE REGULATORS at each main bearing.

POPULAR SIZES PACKAGED IN CONVENIENT SETS

PRODUCTS THE MECHANIC KNOWS AND TRUSTS

THEXTON PISTON EXPANDERS

Simple, but tremendously effective. To correct piston slap, it is necessary to expand the skirt of the piston so that it fits snugly and travels smoothly in the bore. This eliminates rounding rings. The Thexton Piston Expander creates a flexible expansion that takes up the clearance, yet *never binds.*



THEXTON TERMINAL STUD

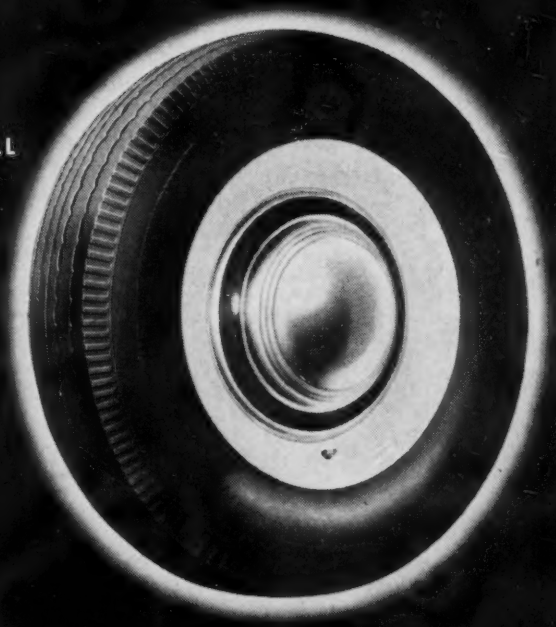
For use on Ford, Mercury, Lincoln and other starters with 5/16" thread.

Repair those stripped starter terminals by simply screwing on a Thexton Terminal Stud over the existing terminal. It cuts its own threads and makes terminal repair a one-minute job.

THEXTON MANUFACTURING CO.
1313 WINTER STREET · MINNEAPOLIS 13, MINNESOTA

Style is the selling feature of '48 cars!

THE WHITEWALL



SELL THE NEW CAR DRIVER WITH THIS STORY—

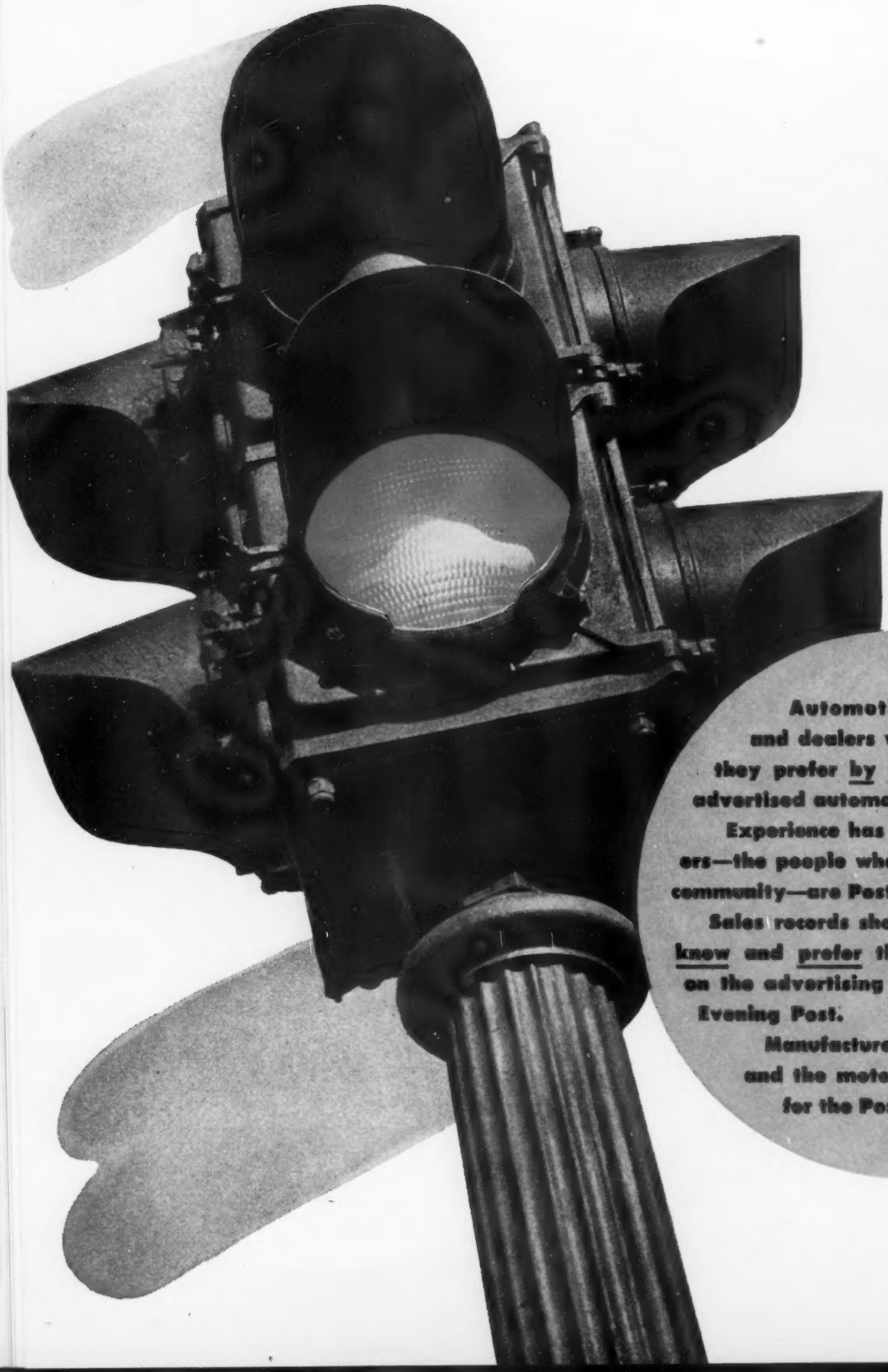
"To keep in style with the rest of your car, wheels need a smart Lyon accessory!"

THE WHEEL COVER

Whitewall prices: Standard steel model (16" wheels) $6.95 per set of four. De luxe steel model (15" and 16" wheels) $9.95 per set of four. Sets of five priced higher. Wheel Cover list price $19.95 per set of four. Fair Trade products sold under applicable Fair Trade laws.

Lyon
INCORPORATED

They all GO



AUTOMOBILE AND

Acme Air Appliance Company, Inc.
A. C. Spark Plug Division,
General Motors Corporation
Adcrafters Company
Allis-Chalmers Manufacturing Company
American Bantam Car Co.
American Chain & Cable Company, Inc.
American Coach Co.
American Octanator Corporation
Anderson Company, The
Armstrong Rubber Company, The
Atlas Press Company
Auburn Spark Plug Co., Inc.
Auto-Lite Battery Corporation,
Subsidiary of The Electric Auto-Lite Co.
Autopulse Corporation

Bear Mfg. Co.
Belden Mfg. Co.
Bell Company, Inc., The
Bendix Aviation Corporation
Black & Decker Mfg. Co., The
BMC Manufacturing Corp.
Bonney Forge & Tool Works
Borg-Warner Corporation
Bowers Battery & Spark Plug Co.
Bowes "Seal Fast" Corporation
Breakstone & Company
Bright Star Battery Company
Buick Motor Division,
General Motors Corporation
Burd Piston-Ring Company
Burgess Battery Company

Cadillac Motor Car Division,
General Motors Corporation

Automotive jobbers and dealers will tell you that they prefer by far to handle Post-advertised automotive products.

Experience has proved that the leaders—the people who set the pace in every community—are Post readers.

Sales records show that these customers know and prefer the products they meet on the advertising pages of The Saturday Evening Post.

Manufacturers, jobbers, dealers and the motoring public all go for the Post.

for the POST

AUTOMOTIVE AFTERMARKET ADVERTISERS IN THE SATURDAY EVENING POST

Carpenter Manufacturing Company
Casco Products Corp.
Casite Corp., The
Caterpillar Tractor Co.
Central Equipment Company
Champion Spark Plug Company
Chevrolet Motor Division,
General Motors Corporation
Chicago Streamlite Corporation
Chrysler Corporation
Chrysler Sales Corporation
Continental Oil Company
Cooper Tire & Rubber Co.
Cristy Chemical Corp.
Crosley Motors, Inc.
Cushman Motor Works, Inc.

Delco-Remy Division,
General Motors Corporation
De Soto Motor Corporation
Diamond T Motor Car Co.
Dieterich Products Corp.
Dodge Car Division,
Chrysler Corporation
Duo-Coach Corporation
du Pont de Nemours &
Company, Incorporated, E. I.

Elcar Coach Corporation
Electric Auto-Lite Company, The
Electric Storage Battery Company, The
Ellinwood Industries
Ethyl Corporation
Exola Products, Inc.

Federal-Mogul Service
Division of Federal-Mogul Corporation
Firestone Tire & Rubber Co., The
Fisher Body Division,
General Motors Corporation
Fisk Tire Company, Division of
United States Rubber Company
Ford Motor Company
Fram Corporation
Freeman & Freeman, Inc.
Fruehauf Trailer Company
Fulton Company, The

Gabriel Company, The
General Electric Company
General Motors Corporation
General Tire & Rubber Company, The
Glostex Products, Inc.
GMC Truck & Coach Division,
General Motors Corporation
Goodrich Company, The B. F.
Goodyear Tire & Rubber Company, The
Gould Storage Battery Corporation
Great Northern Research Laboratories, Inc.
Grizzly Manufacturing Company
Guarantee Products, Inc.
Guide Lamp Division,
General Motors Corporation
Gulf Oil Corporation

Hammer Blow Tool Co.
Hastings Manufacturing Company
Heat Division
DeMert & Dougherty, Inc.
Heil Co., The
Higgins, Incorporated
Hollingshead Corporation, R. M.
Hollis Company
Hudson Motor Car Co.
Hull Mfg. Co.

Indian Motorcycle Co., Division of
Rogers Diesel and Aircraft Corp.
International Harvester Co.
International Mfg. Co.
International Parts Corporation

Johnson & Son, Inc., S. C.

Kaiser-Frazer Corporation,
Graham-Paige Motor Corporation
K-D Lamp Division,
Noma Electric Corp.
Kelly-Springfield Tire Company, The
Kendall Refining Company
Kerkling & Company
Kit Manufacturing Co.

Lee Rubber & Tire Corporation
Lincoln Division,
Ford Motor Company
Lisle Corporation
Loney Co., Harley C.
Lubaid Company
Lyon, Incorporated

Mack Mfg. Corporation
Macmillan Petroleum Corporation
Mall Tool Company
McBurney, A. D.
McQuay-Norris Mfg. Co.
Mercury Division,
Ford Motor Company
Miller Rubber Company, Division of
The B. F. Goodrich Company
Minnesota Mining and Manufacturing Co.
Moog Industries, Inc.
Motor Safety Institute
Motorola, Incorporated
"M" System Manufacturing Co.
Muskegon Piston Ring Co.

Nappanee Trailer Company
Nash Motors, Division of
Nash-Kelvinator Corporation
National Battery Corporation,
Gould Commercial Division
National Carbon Company, Inc.,
Unit of Union Carbide and
Carbon Corporation
New Departure Division,
General Motors Corporation
New York Lubricating Oil Co.
Noblitt-Sparks Industries, Inc.

Octa-Gane
Oldsmobile Division,
General Motors Corporation

Packard Motor Car Co.
Palace Corporation
Park Chemical Company
Parker Rust Proof Company
Peckat Manufacturing Co., Charles
Pennsylvania Grade Crude Oil Association
Pennsylvania Rubber Company
Pennzoil Company, The
Perfect Circle Corporation
Petroleum Solvents Corp.
Philco Corporation
Phillips Petroleum Company
Plastiform Mfg. Co.
Plomb Tool Company
Plumb, Inc., Fayette R.
Plymouth Motor Corporation
Polaroid Corp.
Pontiac Motor Division,
General Motors Corporation
Power Brake Parts Mfg. Co.
Power-Pak Products, Inc.
Publicker Industries, Inc.
Pyrene Manufacturing Company
Pyroil Company

Quaker State Oil Refining Corporation

Ramsey Corporation
Raybestos Division
of Raybestos-Manhattan, Inc.
Ray-O-Vac Company
Reo Motors, Inc.

Sackett-Nicholson Corp.
Schrader's Son, A. (Div. of
Scovill Manufacturing Company)
Schult Corporation
Sealed Power Corporation
Seiberling Rubber Company
Servicycle Western Corporation
Shakeproof, Inc., Division of
Illinois Tool Works
Shaler Company, The
Shell Oil Company, Inc.
Simoniz Company, The
Simplex Products Corp.
Sinclair Refining Company
Socony-Vacuum Oil Company, Inc.
South Wind Division,
Stewart-Warner Corporation
Standard Oil Company of California
Stewart-Warner Corporation
Studebaker Corporation, The

Texas Company, The
Thompson Mfg. Co., Earl A.
Tide Water Associated Oil Company
Timken Roller Bearing Company, The
Trailer Coach Manufacturers Assn.
Trico Products Corporation
Trippe Manufacturing Co.
Truckstell Co., The
Tucker Corporation
Turk Corp., C. K.

United Motors Service,
Div. of General Motors Corporation
United States Asbestos Division
of Raybestos-Manhattan, Inc.
United States Electric Mfg. Corp.
United States Rubber Company
U. S. Industrial Chemicals, Inc.

Vagabond Coach Manufacturing Co.
Vulcan Manufacturing Co., Inc.

Wagner Electric Corporation
Walker Manufacturing Company
of Wisconsin
Warner-Patterson Company
Wayne Pump Company, The
Weaver Manufacturing Company
Westinghouse Electric Corporation
White Motor Company, The
Whizzer Motor Company
Wilkening Manufacturing Company
Willard Storage Battery Company
Willys-Overland Motors, Inc.
Winchester Repeating Arms Company,
Division of Olin Industries, Inc.
Wind Turbine Co.
Wix Accessories Corp.
Wolf's Head Oil Refining Company, Inc.

"X" Laboratories, Inc.

Zecol, Inc.

Your best customers *know* and *prefer* Post-advertised products.

New Products . . . . . (Continued from page 146)

86

Perfect Circle Corp. is now producing Plastigage, a novel device for checking main and connecting rod bearing clearances. In operation a piece of Plastigage is cut off and placed on the bearing shaft. The bearing cap is then retightened on the crank shaft. When the bearing cap is removed, the width (not the thickness) of the flattened Plastigage is measured with the scale on the Plastigage envelope. The reading is directly in thousandths of an inch. Plastigage is vailable in two sizes: for measuring clearances of 2 to 6 thousandths; and for measuring clearances of 4 to 9 thousandths.

(For further information use coupon on p. 53)

87

Ramsey Corp. is keynoting its plan for 1948 with the Ramco Repowering Plan which is designed to provide Ramco dealers with a complete program to sell not just piston rings alone but all four necessary units, carburetion, ignition, and cooling. In their own line Ramco are featuring the Ramco 10-Up Piston Rings and Piston Skirt Stabilizers.

(For further information use coupon on p. 53)

88

Cal-Van Machine Products, Inc. is featuring in its line a 3-in-1 puller, a timing gear puller, a gear puller. Additional products in the Cal-Van line are a carbon scraper, light bulb ring compressor, creeper casters, bushing removers and reamers.

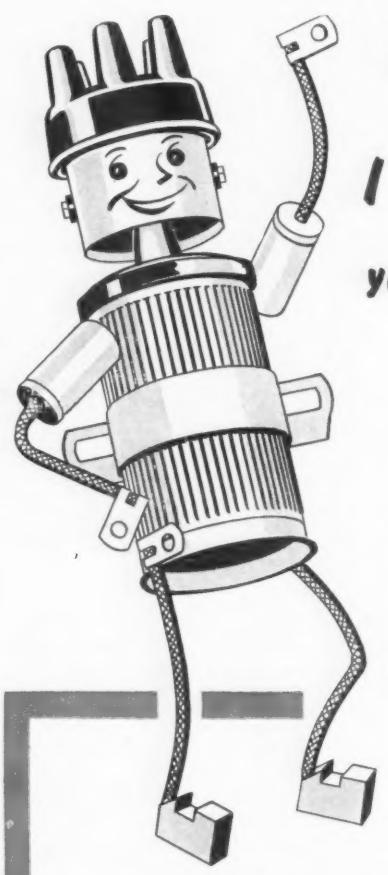
(For further information use coupon on p. 53)

89

Maplewood Products Co., Inc. have added a newly developed cold parts cleaner for removing carbons, dyes, gums, dirt and grease deposits from carburetors, fuel pumps, pistons, hydraulic brake equipment parts, etc. the name of Gumco Metal Brite Parts to their line of cold cleaning solvents for the automotive trade. Sold under Cleaner it is claimed to require little or no agitation in operation.

(For further information use coupon on p. 53)

(Continued on page 152)



HI!
I AM PEEDEE
YOUR ELECTRICAL HELPER

You're going to see a lot of me. In advertisements and trade shows . . . sales literature and posters . . . window streamers and point-of-sale displays . . . in fact, *everywhere I can help you sell more and better tune-up jobs.*

I will take P&D parts one by one . . . hold 'em in my hand and open 'em up for you . . . show you from the inside out that my complete line of starting, lighting and ignition parts is the finest available in quality and workmanship. And I'll prove to you why this means more satisfied customers for you . . . keeps you ahead of competition.

So watch for me — and see how the P&D line can make quick, real profits for *you.*

Turn out better tune-up jobs with Pee Dee

GENUINE P&D IGNITION PARTS

P&D MANUFACTURING COMPANY, INC.
LONG ISLAND CITY 5, N. Y.
STARTING • LIGHTING • IGNITION

6164

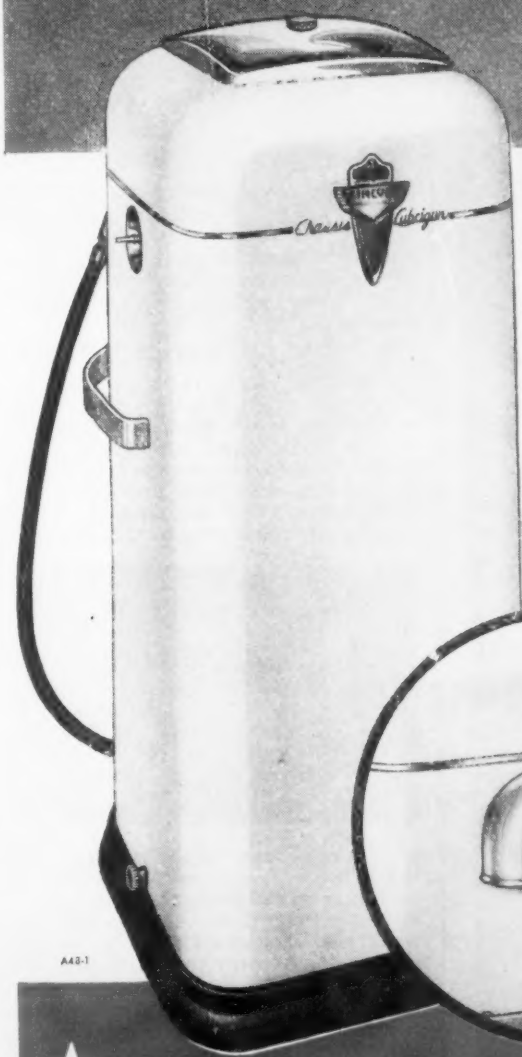
"I've got a job as baby sitter tonight, but you oughta see the baby."

LUBRICATING EQUIPMENT

Styl Engineered by

LINCOLN

NEW SQUARE SLEEVE CABINET UNITS



★ **Style-Setting Design**—Emphasizes smooth, vertical sweep of harmonious lines. Permits units to be arranged flush to each other giving the effect of a single battery of equipment.

★ **Easy to Keep Clean**—Contour of Cabinet is curved and smooth, no sharp corners, exposed screws or crevices; Chrome Trim Band is securely recessed in Cabinet body.

★ **Drums Easily Changed**—Merely loosen two screw-type fasteners on each side of Sleeve near Base; Handle is positioned so that one man can easily lift Pump and Sleeve Assembly, as a unit, off Base. A shallow, circular depression in Base provides anchorage for locating 100-lb. Drum, preventing shifting of container when unit is moved.

★ **Combination Handle and Bumper Bar**—Curved from sides of unit across back of Sleeve just below hose outlet, provides convenient means for pulling or pushing unit instead of pulling on hose; serves also to protect Cabinet when it is pushed back against wall after use.

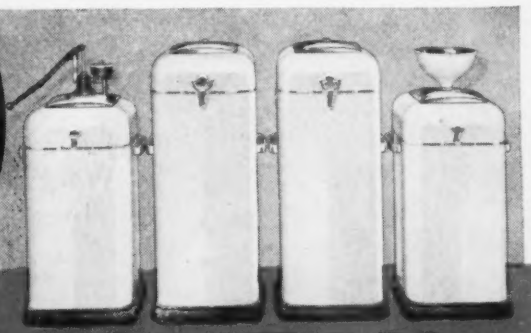
★ **Combination Base and Bumper**—Compact, no pockets or recesses. Portable models are equipped with four large, free-swiveling, ball-bearing casters. Stationary models are equipped with four studs.

★ **Air Inlet**—With concave shield, is recessed in side of Sleeve; protects finish of Cabinet.

★ **Pump Readily Accessible**—Stainless steel Bonnet, curved and tapered to conform with styling of unit, can be quickly removed by unscrewing one center fastener giving access to pumping unit. Curved Bonnet protects top of Cabinet, and prevents using top of unit for storage of miscellaneous service items.

★ **Business-Building Showmanship**—Sleeve bonderized and finished in lustrous white baked enamel; Bonnet, decorative trim, Bumper Bar, Trade-Mark Shield and stylized Title Plate are satin-chrome plated; Base in black.

Write **for Information on this New Business Building Line**



★ **Arrangement of Hose Assembly**—Provides maximum utility and ease of operation. Hose is located at back of unit, out-of-sight when not in use, yet readily accessible. Design of Control Valve Hanger permits placing nozzle in Socket from any side; cover on Bracket keeps Control Valve from touching Cabinet. Hose Assembly, when draped at back of Cabinet, does not touch the floor.

LINCOLN

Pioneer Builders of Engineered Lubricating Equipment

LINCOLN ENGINEERING COMPANY • 5701 NATURAL BRIDGE AVE., ST. LOUIS 20, MO.

90

Blackhawk Manufacturing Co. have announced two new heavy-duty hydraulic jacks, the 30-ton FB-11 and the 50-ton GB-11. In place of the single pump conventionally used these new Blackhawk models combine in one unit, the load pump and speed pump. The load pump cuts in automatically when the speed pump has raised the saddle to the load. Other features include the recessed safety release valve, overall closed construction, ports for gage or valve installation, pump beam protection, carrying handle and-on-the side operation.

(For further information use coupon on p. 53)

90-a

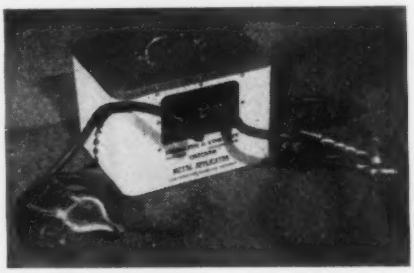
du Pont is featuring "Duco" Metalli-Chrome lacquer among its list of new or post-war refinishing products. Included in the list are a PX glazing putty, a new machine polishing compound and a new black rubber dressing. According to du Pont, Metalli-Chrome differs from conventional type finishes in that light rays actually penetrate the paint film and are reflected and diffused by tiny mirror-

like aluminum particles. du Pont "Rubberstone" is described as a preparation for tires, running boards and floor mats, while their "Duco" Red Oxide Putty features faster drying with less shrinkage, and easier sanding.

(For further information use coupon on p. 53)

91

Kerkling & Co. have introduced the new K & W Metal Applicator. Differing from earlier models only slightly in appearance this applicator has been re-designed mechanically. According to the manufacturer the use



of this applicator in conjunction with the K & W Mechanical Method of repairing cracked blocks and heads is an important factor in speeding up this type of operation. They claim that in most cases the time required for a job is only one-third of that required by the old strutpinning procedure. Kerkling has now made available its K & W Waterless Soap in 4 oz. tubes.

(For further information use coupon on p. 53)

92

Plastics Unlimited, Inc., are producing a full vision patented plastic top for convertibles, furnished in clear or tinted material and which may be installed by two persons in about a

(Continued on page 154)

THE GENUINE *Mallory* MASTER COIL

OVERCOMES NORMAL SPARK LOSS • IS COMPLETELY WATERPROOF • IS OIL SEALED AND AGE-PROOF

The Mallory Master Coil—for either 6 volt or 12 volt systems—is something brand new in a waterproof, long-lived ignition coil.

Its water-proof design is a novel Mallory development. The coils are housed in bakelite and the windings are completely sealed in a special transformer oil to eliminate short circuits or breakdowns. The wire leading to the distributor is also sealed in to make this coil absolutely water-proof. To support this claim the Mallory Coil can be completely submerged in water with the engine continuing to run.

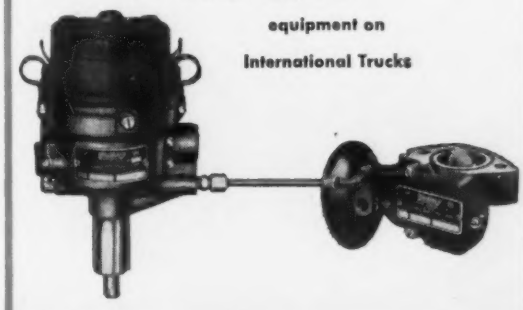
The Mallory Master Coils will deliver more energy than ordinary coils so that a hotter spark is produced; hence with a Mallory Master Coil, the engine will always start easily, even when the battery is low in cold weather. Extreme dependability and superior performance are further assured because of the water-proof housing of the Mallory Master Coils.

Our reputation among fleet operators for building dependable and efficient coils, condensers, and distributors, is enviable and has been gained through years of satisfactory service.

DISTRIBUTION OF MALLORY PRODUCTS for Sales and Service May Be Open in Your Territory. Write us for full details.

THE NEW MALLORY DISTRIBUTOR—GOVERNOR IS NOW STANDARD ON

American Aerocoach
Autocar Federal Trucks
and now is optional
equipment on
International Trucks



MALLORY ELECTRIC CORPORATION
Manufacturers of Automotive Electrical Devices
DETROIT 4, MICHIGAN

quarter of an hour. Plexi-Top, the trademarked name by which this new top is designated, is fabricated from Plexiglas, a molding material manufactured by Rohm and Haas Company. Plexi-Tops fit over the retracted top regularly furnished on convertibles and the regular top may be used at any time by detaching and removing the Plexi-Top. Plexi-Tops are currently available for '42, '46 and '47 Ford and Mercury convertibles but later will be made for other makes.

93

Cadet Laboratories, Inc. have made their skin cream, Hand-Saver, available to consumers. When applied to the hand, Hand-Saver forms a film on the skin which according to the manufacturer guards against inflammation, irritation and infection. It is rubbed on the hands before work is begun and is removed with the use of water which causes it to form a lather that removes the dirt.

(For further information use coupon on p. 53)

94

New York Air Brake Company is producing a universal hydraulic fitting kit designed to simplify connecting either their Hycon Compound Cylinder or a conventional master cylinder to

one or more hydraulic lines ¼ in. or 5/16 in. in diameter. The block is tapped and machined to accommodate three lines. In addition there is a ⅛ in. P.T. stop light switch outlet. The tubing outlets are not completely drilled. Before installing it is necessary to drill through the outlets which are to be used. A ⅛ in. drill is included with the kit for this purpose.

(For further information use coupon on p. 53)

95

United States Rubber Co. has introduced the U. S. Royal Alignment and Balance Demonstrator, a complete unit for demonstrating the effect of missalignment and out-of-balance on tires. This unit consists of brochures on wheel alignment and wheel balance and a miniature axle fitted with two small U. S. Royal Master Tires. With this miniature demonstrator it is possible to demonstrate the actual effect of misalignment and lack of balance.

(For further information use coupon on p. 53)

(Continued on page 158)

USE A JOB-FITTED TOOL

In everyday jobs like these, and others in automotive shop service ... use the *right* tool for each type of work! Always use ARO ... big power ... light weight ... small size. Also available in compact ARO Kit with 7 complete tools. Ask your Aro Jobber. The Aro Equipment Corporation, Bryan, O.

ARO AIR TOOLS

"What's this, young lady! Driving without a license?"

IT'S NEW! SERVICE TESTED! PROVEN!

Whitaker "707" SPARK PLUG CABLE

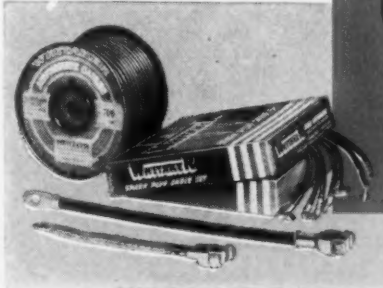
a superior quality, 7 copper strand — 7mm neoprene heavy duty cable having these important features:

- RESISTS CONSTANT MOTOR HEAT
- WILL NOT CRACK UNDER EXTREME COLD
- WITHSTANDS DESTRUCTIVE FRICTIONAL WEAR
- CANNOT BE PENETRATED BY MOISTURE
- IMPERVIOUS TO DAMAGING GREASE
- REPRESSES CORONA
- REPELS OIL

It's heavy neoprene insulation that does it! The NEW Whitaker "707" resists damaging elements that cause early cable deterioration and resistance to full delivery of power. Sold through leading jobbers everywhere.

★ ★ ★

WHITAKER LABEL
Assures Quality Cable



WHITAKER
CABLE CORPORATION

KANSAS CITY, MO.
ST. JOSEPH, MO.
PHILADELPHIA
LOS ANGELES

Pioneers and Leaders in Automotive Cable Products Since 1920

YOU'LL SELL MORE LAMPS

G-E'S BIG, NEW SPRING

Want extra profits during spring changeover? Then tie in with the greatest auto lamp promotion in General Electric history—it's all set to go!

What a payoff! One car out of six needs some essential lamp—headlight, stop-tail, parking or license plate light. And General Electric auto lamps are easy to sell, easy to install—and give you an excellent profit. *So be sure to check the lights of every car left for service!*

Watch for G-E Auto Lamp Ads in:

Saturday Evening Post—March 20, April 10, April 24.
Collier's—March 27, April 24, May 15.

General Electric's big, new spring advertising campaign on auto lamps is timed just right to help you sell more and *make* more. It's nationwide, hard-hitting, and it reaches *your* customers with an urgent reminder to get their lights checked *now!*

Big G-E Lamp ads will appear in both *The Saturday Evening Post* and *Collier's* during March, April and May. And at the same time, the "have your lights checked" idea will be hammered home to car owners by commercials on G-E's popular "Tales of Willie Piper" radio program, broadcast weekly over 166 ABC stations. Cash in on this mass advertising by checking the lights of every car you service!

BIG ACTION-PACKED CAMPAIGN

THAN EVER BEFORE WITH

AUTO LAMP PROMOTION

New Products . . . . . (Continued from page 154)

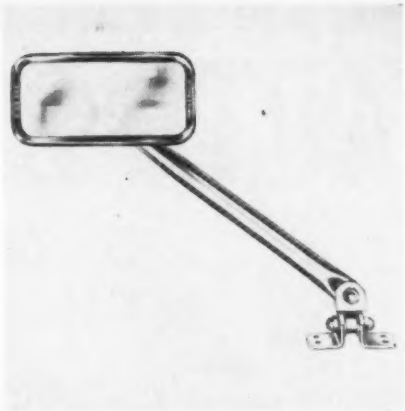
96

Edmund J. Wudel has introduced two new products. The Vixen Spark Plug Tester incorporating a constant voltage spark coil and a visual indicator for viewing the firing and condition of the spark plug under compression test. The Vixen Spark Plug Cleaner features a new method for positioning the rubber grommet, formerly held in place by a metal and four screws. No tools are now necessary for replacement of the grommet which accommodates any size spark plug. Especially compounded for use with the Vixen cleaner is Crisilite, a uniform and effective type of abrasive.

(For further information use coupon on p. 53)

97

American Automatic Devices Co. announces the addition of a new heavy-duty truck and bus mirror to their King Bee Protecto Mirror line.

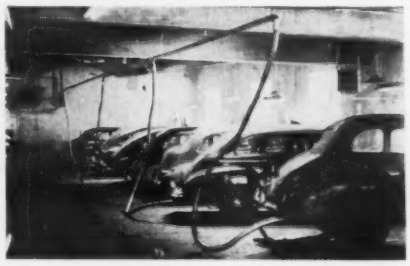


This new mirror, Model No. 446, extends well beyond the body of the truck so that complete vision can be obtained with the widest trailer hooked onto the narrowest cab and is designed to eliminate the need of extra bracing of any kind.

(For further information use coupon on p. 53)

98

National System of garage ventilation is marketing a basic unit that includes blower, motor, specially designed intake and discharge chamber,



two 18 ft. lengths of flexible tubing, pulleys, switch, and ceiling brackets. All necessary units are provided to service two machine stalls. This ventilation system works from overhead and can be fitted to any floor plan arrangement.

(For further information use coupon on p. 53)

(*Continued on page* 160)

"I almost married her but she wiggled out of it."

EASY DOES IT!

WHEN YOU USE GENUINE

PONTIAC PARTS

Pontiac Factory-Engineered Parts are easy to obtain and easy to install. Your nearby Pontiac dealer carries a large stock of parts, service kits and new assemblies, most of which fit several years' Pontiac models. You save time and trouble—and your Pontiac owners are assured the dependability they associate with Genuine Factory-Engineered Parts.

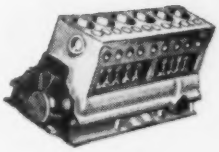
Next time you service a Pontiac, use Genuine Pontiac Parts. They mean an easier job for you . . . a better job for your customer.

Use Genuine Pontiac Parts for 5 Reasons

FACTORY Parts ENGINEERED

PRECISION FIT
GENEROUS DISCOUNT
MINIMUM INVENTORY
FINE PERFORMANCE
GREATER OWNER SATISFACTION

ASSEMBLIES

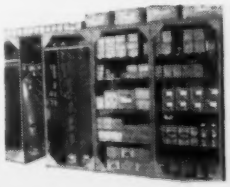


Completely built assemblies, ready to install, save you time and guarantee full dependability and performance.

SERVICE KITS

Pontiac's wide assortment of parts kits contains *all* necessary parts for many jobs. And most of them will service several models of Pontiacs. There's no need for you to look up a long list of parts when you're in a hurry.

COMPLETE STOCKS



Your Pontiac dealer can supply parts quickly from his own large stock or from a nearby warehouse. There's no need for you to maintain an expensive inventory of Pontiac parts.

There's a PONTIAC dealer near you to serve you Fast!

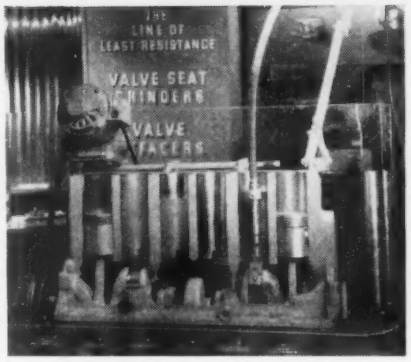
99

Wagner Electric Co. is featuring its new Sangamo Tachograph. This Tachograph is a recording speedometer that makes a daily graphic record of a vehicle's operation, showing speed, time and distance. Taking the place of the regular speedometer, the Tachograph records on a chart when the engine is off, when idling, and when vehicle is in motion. It also indicates the exact speed occurring at any time and gives the continuous running record of distance covered. The chart indicates the exact time of occurrence of all operational data recorded throughout the 12 or 24-hr. period.

(For further information use coupon on p. 53)

100

Waterbury Tool has introduced a Portable Crankshaft Grinder. This Grinder is for use in grinding crankshaft throws on engines with the cylinders in line and works from the top, in the block. It is not necessary to remove the crankshaft from the engine. In operation it is only necessary to remove the head and the oil pan. While grinding, an included motor drive rotates the crankshafts through the motor fan belt pulley. The transmission therefore stays in neutral eliminating the chatter from driving through wheels, differentials and transmission. A cut of the wheel is regulated by a hand micrometer feed graduated in .0005 inches.



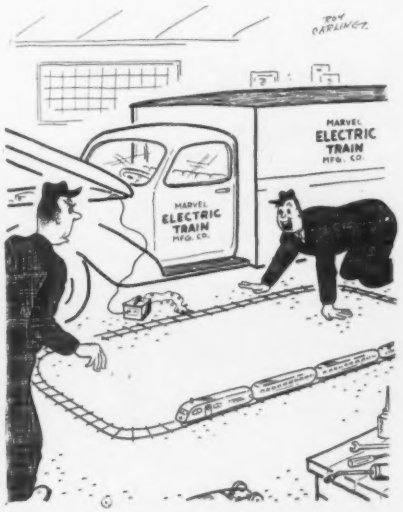
(For further information use coupon on p. 53)

101

Mallory Electric Corp. is producing a new speed-controlled governor which will be available as a replacement unit. This governor incorporates a suction diaphragm to furnish the power to actuate the governor throttle and a centrifugally operated air-valve is mounted on the shaft which revolves with the engine. This valves slides radially in the bore in opposition to the force of the spring; thus the opening of the centrifugal valve varies with the rpm of the engine. In operation manifold suction is not the controlling factor of this governor, but is used only as the force of power to move the throttle whenever called upon by the piston which moves in accordance with changes in engine rpm. It governs the speed as selected by varying the position of the spring in the housing.

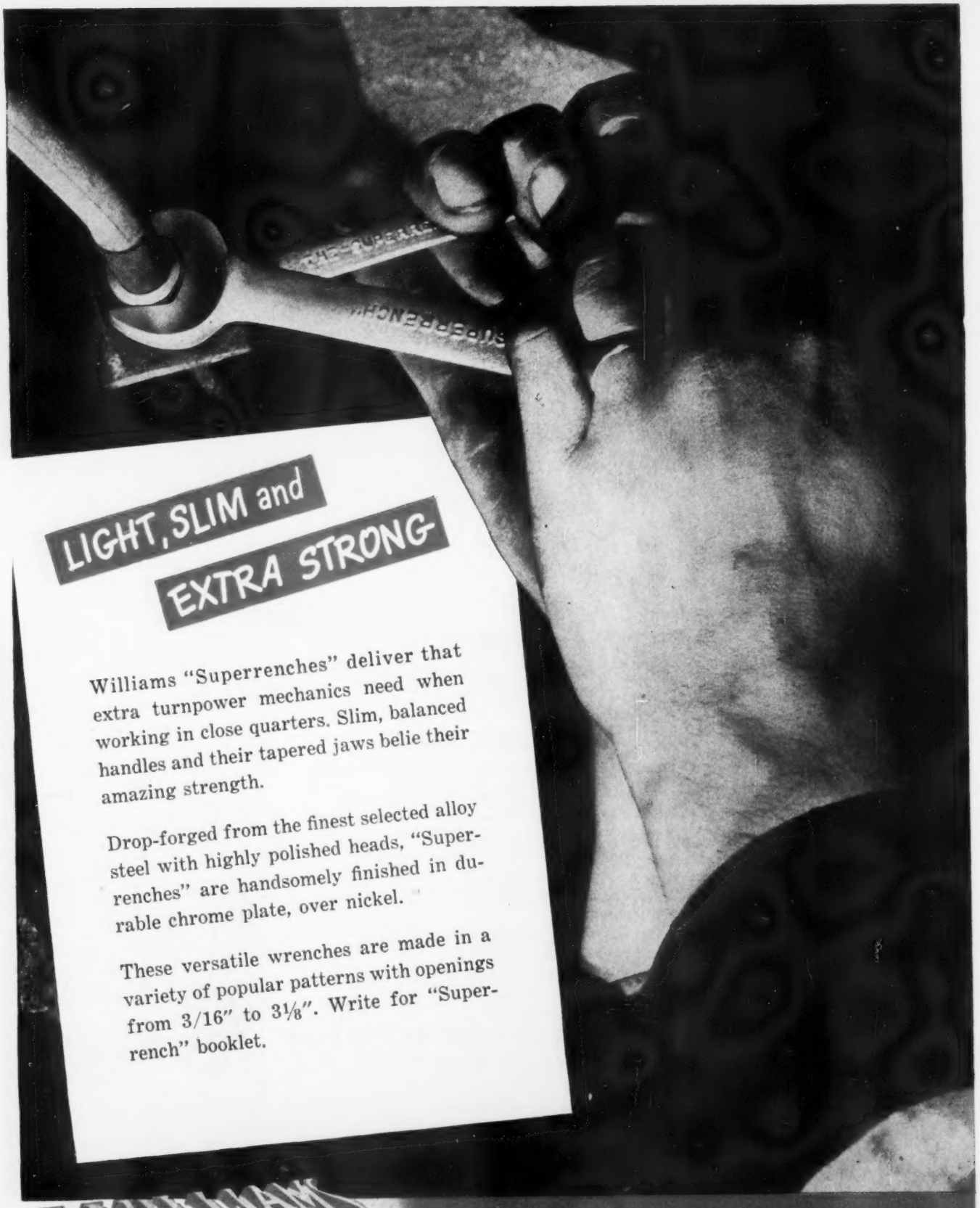
(For further information use coupon on p. 53)

(Continued on page 163)



"But I am testing the battery, boss."

U.S. Center Island Storage Cabinet —For Use With Center Island Reels
Model JB-900 Stationary Wall Liner Lubricator
U.S. Center Island Service Reels—Connect to Island Storage Cabinet or Lube Storage Room
U.S. Ceiling or Wall Reel
Model JB-25 Air-Operated Chassis Lubricator
Model JB-670 Portable Hand-Operated Gear Lubricator
Model JB-530 Brand Display Chassis Lubricator
Model JB-590 Portable Chassis Lubricator
U.S.
DELIVERS THE EQUIPMENT PACKAGE TO FIT YOUR NEEDS
Whether you have a small establishment or a large one—
Whether you operate a service station or repair shop—
Whether you hire one man or a dozen—
Whether you have a large layout on the main highway or an establishment on a side street—
U. S. has the units to fit your requirements.
U. S. Air Compressors, Lubrication Units and Lifts are designed to modern trends for high display and merchandising appeal.
The complete U. S. line is engineered for dependable, long, trouble-free life.
Your U. S. Jobber can assist you in selecting the right units to fit your exact needs.
THE U.S. AIR COMPRESSOR COMPANY
5300 HARVARD AVENUE
CLEVELAND 5, OHIO
Model MK-6811 Two-Stage, Heavy Duty Air Compressor
Model LA-338 Single Stage, General Purpose Air Compressor
Model MK-663 Two-Stage, Heavy Duty Air Compressor
Model FA-906 Two-Stage, Base Mounted Air Compressor Unit
Model A-15 Full Hydraulic Drive-On Lift
U.S. Full Hydraulic Two-Post Lift
Model A-2 Full Hydraulic Free-Wheel Lift



LIGHT, SLIM and EXTRA STRONG

Williams "Superrenches" deliver that extra turnpower mechanics need when working in close quarters. Slim, balanced handles and their tapered jaws belie their amazing strength.

Drop-forged from the finest selected alloy steel with highly polished heads, "Superrenches" are handsomely finished in durable chrome plate, over nickel.

These versatile wrenches are made in a variety of popular patterns with openings from 3/16" to 3⅛". Write for "Superrench" booklet.

WILLIAMS

• OUR DISTRIBUTOR IS YOUR LOCAL WAREHOUSE

OPEN END, BOX, ADJUSTABLE & RATCHET WRENCHES; DETACHABLE SOCKETS & SETS; IMPACT SOCKETS; TOOL HOLDERS; LATHE DOGS; "C" CLAMPS; CHAIN PIPE TONGS & VISES; FLANGE JACKS; PLIERS; SCREWDRIVERS; PUNCHES & CHISELS; SOFT FACED "NUPLAPLEX" TIPPED HAMMERS; HOIST HOOKS; EYE BOLTS; ROD ENDS; CRANK & BALANCE HANDLES; THUMB SCREWS & NUTS.

J. H. WILLIAMS & CO., BUFFALO 7, N. Y. *Distributors Everywhere*

New Products . . . . .

(*Continued from page* 160)

102

Lincoln Engineering Co. has introduced an improved Servmobile, a portable tool, accessory and supply carrier. The Servmobile has a heavy-gage steel work table top covered with a black rubber mat. A tool panel permits an arrangement of hangers to accommodate a large variety of tools. The other side of the Servmobile has two utility storage spaces for miscellaneous service accessories. The unit is mounted on two hard-rubber swivel-type, ball bearing casters, and two wheels with hard-rubber tires for easy portability.

(For further information see coupon on p. 53)

103

Resistoflex Corp. in addition to its regular line of Gasoil Hose and Fittings, is featuring the new "See-All" Box of Brass Assortments. These See-All units are transparent plastic boxes through the cover of which is possible to see the entire assortment at a glance. The boxes are reusable and are available in three different assortments.

(For further information see coupon on p. 53)

104

Thermoid has introduced a new merchandiser, the Model 100, designed to give complete radiator hose coverage. Shelf space is available for twenty popular sizes of curved hose packaged two pieces to the carton. Space for straight hose will accommodate eight 3 ft. lengths of hose in four sizes 1¼ in., 1½ in., 1¾ in. and 2 in.

(For further information see coupon on p. 53)

105

Wyco is featuring several new flexible shaft machines and tools. New in design and controls, the WYCO line is featuring the "Handymatic" Repair Shop Machine. This is a mobile miniature machine shop with all accessories included in a portable cabinet on which is mounted the motor and flexible shaft. Other units in the line include the Wycomatic Polisher, and the Wyco Speed Saw and Hole Cutter.

(For further information see coupon on p. 53)

106

Wix Accessories Corp. is now manufacturing Wix-Lite, an auxiliary light that mounts on the frame underneath the vehicle. Fog-lighting the road under the car in a 40-ft. circle of light it is without glare for oncoming drivers because the light itself is not visible to them. It also serves to light the road for backing up and for entering or leaving a vehicle. It is provided with an unbreakable plastic lense, a filament type bulb, polished convex metal reflector, metal frame and adjustable metal mounting bracket. It is furnished complete with mounting bolts and nuts, all wiring and a switch.

(For further information see coupon on p. 53)

107

Signal-Stat Corp. have announced a new product, the Stoplite Pilot, for passenger cars, trucks and buses. This

(*Continued on page* 166)

YOU *Save* BY STANDARDIZING

on Airco Nos. 87, 90 and 230 Electrodes

(A.W.S. Class. E6011-12-13)

Here are three A.C.-D.C. electrodes that meet approximately 61% of all general-purpose, mild steel welding requirements of garages and repair shops.

Airco No. 87, 90 and 230 produce weld metals of high mechanical properties. Their excellent slag coverage results in an unusually smooth deposit, with easy slag removal. Airco No. 230, for example, has a specially formulated coating that produces a spraying type of arc. This is of great assistance in the performance of vertical and overhead welding, permitting high welding speeds with excellent deposits.

All three electrodes are recommended for normal or high speed welding in the flat, vertical or overhead position and are known for their:

...Low Spatter Loss
...Light, Easily Removed Slag
...Unusual Smooth Weld Deposits
...Excellent Operating Characteristics

But learn all about these general-purpose electrodes for yourself. Ask for Airco Electrode Catalog No. 120A. Just fill in and mail the coupon for your copy. Address: Air Reduction, General Offices, 60 East 42nd Street, New York 17, N. Y. In Texas: Magnolia Airco Gas Products Co., General Offices, Houston 1, Texas. Represented Internationally by Airco Export Corp.

AIRCO **AIR REDUCTION**

Offices in All Principal Cities

Headquarters for Oxygen, Acetylene and other Gases . . . Carbide . . . Gas Welding and Cutting Apparatus and Supplies . . . Arc Welders, Electrodes and Accessories.

MG
Air Reduction
60 East 42nd Street
New York 17, N. Y.
Please send me the Airco Electrode Catalog No.120A.
Name.....
Firm.....
Address.....
City.....Zone.....State.....

YOUR Springboard

Collier's will be telling motorists WHAT TO DO--

Read how bigger Spring profits can COME TO YOU!

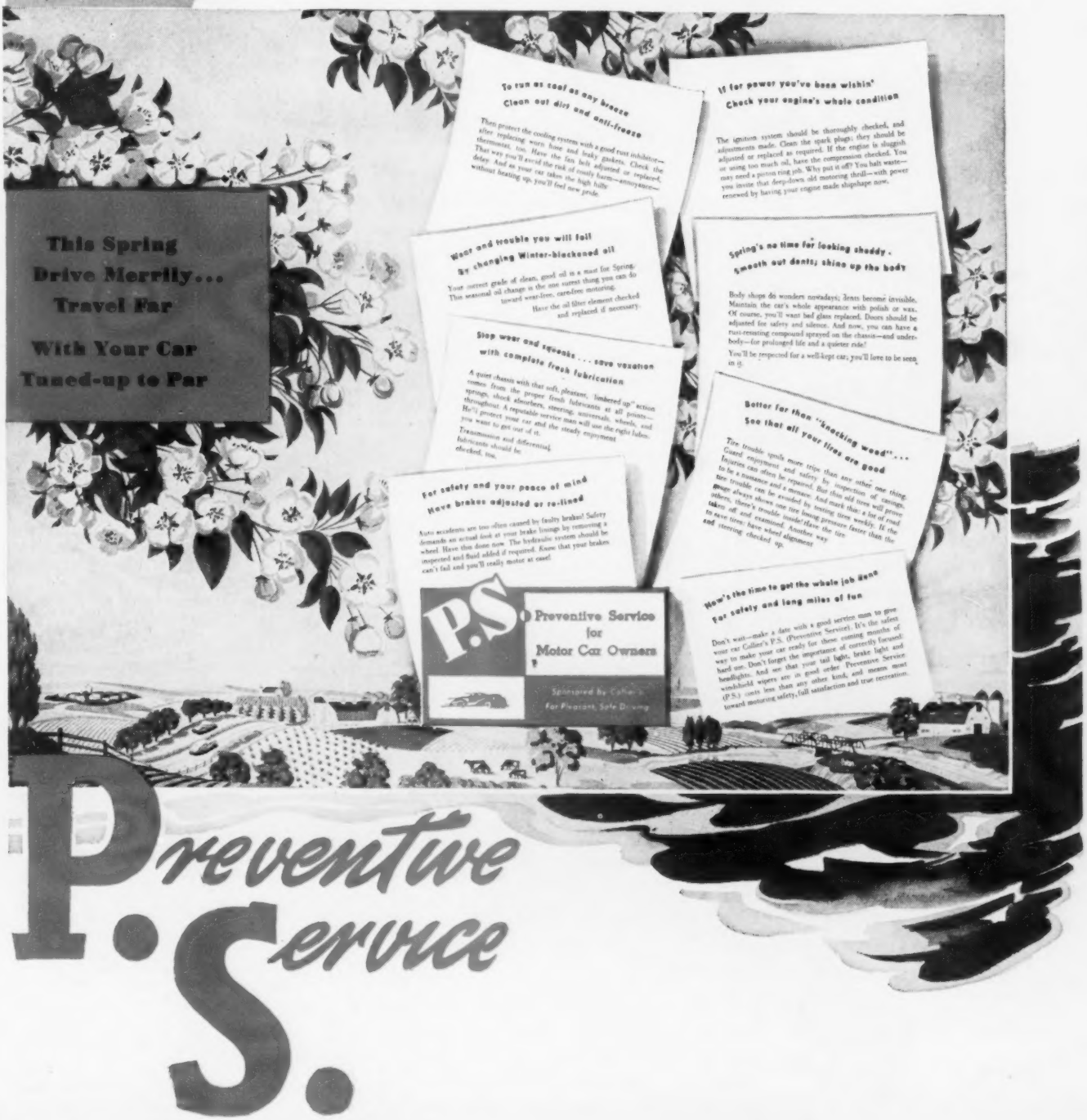
Collier's

for Spring Business

It's like "lighting the fire" under the American motorist. His biggest hustle-up prod to get his car's needed Spring services is Collier's Preventive Service campaign. And this Spring's great-outdoors picture idea, jingle headlines, pride appeal, and solid sense will give 'em the urge as never before to drive a car that's shipshape—from tires to trim!

But YOU, Mr. Dealer, and YOU, Mr. Distributor, have got to tell YOUR market that you have got the goods. Collier's makes it easy for YOU—with plenty of powerful tie-in material that YOU can use to bring the business YOUR way for YOUR profit.

WATCH IT WORK FOR YOU. Dive into this Spring's extra-big P. S. volume. Write NOW to Collier's Promotion Department, 250 Park Avenue, New York 17, New York.



Preventive Service

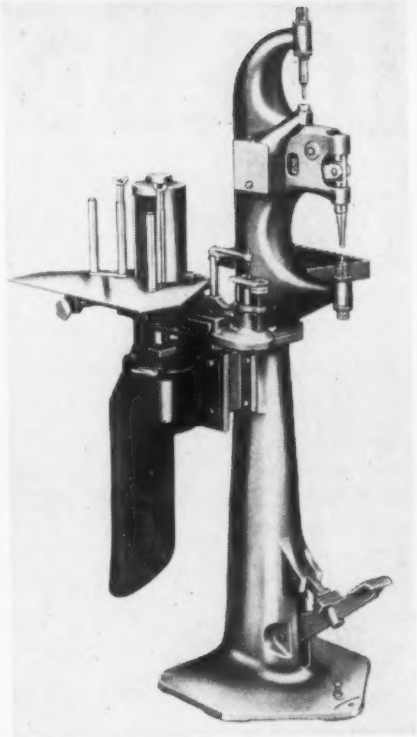
Pilot comes ready-wired and may be installed to serve either one of two functions; as a Stoplite Pilot it mounts on the dash and offers visible proof at all times of whether or not the stoplite is functioning properly. As a headlight Hi-Beam Indicator it notifies the driver when his hi-beam headlights are on. This unit comes in two styles, Clamp-On or Thru-Dash and is available, in 6 and 12 volts.

(For further information see coupon on p. 53)

108

Chicago Rivet & Machine Co. is resuming manufacture of the Admiral Brake Reliner, a unit which was discontinued during the war. This unit, a heavy-duty all-purpose brake reliner is most suitable for shops handling a large volume of brake repair and clutch refacing work. The head is of the multiple type which eliminates the necessity for changing tooling when switching from relining to riveting operations. Old rivets are knocked out and fall into a self-contained collector. The riveting throat is 7 in. deep, permitting the handling of any size brake shoe as well as small diameter bands.

(For further information see coupon on p. 53)



109

Weatherhead is featuring the new H-350 QA Fittings and Fuel Line Merchandiser. Designed as a companion to the F-168 Master Fittings Merchandiser this unit provides a complete, selected assortment that will service any type of installation. It includes 335 Original Equipment Fuel Lines, 355 QA Re-usable Hose Fittings and 175 ft. of Weatherhead Flexible Hose.

(For further information see coupon on p. 53)

(Continued on page 168)

Get the new Model H83

GRAY-MILLS AGITOR

PARTS CLEANING SYSTEM

. . . Model H-83 gives you exclusive Agitor features . . . at a new low price $99.50

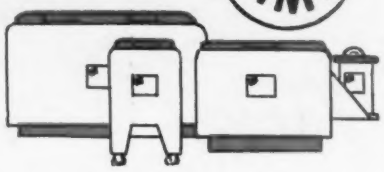
You'll get more *useful* working space in the H-83 than in many parts washers twice its size. 24 gallons of agitated solvent soaking space gives you ample room for large parts . . . while you clean small parts under flowing solvent from the hi-volume pump. Here's the dual utility you want. Already price conscious users are saying that the new H-83 is just what they've been looking for. Get the facts for yourself and you'll get an AGITOR.

7 REASONS WHY YOU SHOULD BUY AN AGITOR NOW . . .

1. You save 35 to 65% cleaning time.
2. You avoid fire hazards. The Agitor is safe!
3. Improve shop appearance and efficiency.
4. Better cleaning reveals wear and defects.
5. Easier cleaning—greater convenience.
6. You end "bucket" mess.
7. You save solvent.

LESS CLEANING TIME

MORE PROFIT TIME



SEND FOR AGITOR CATALOG

GRAY-MILLS CORPORATION

1943 RIDGE AVE. EVANSTON, ILL.

Time Savers!

GRAY-MILLS

SUPER AGITENE concentrate fast, cold degreasing solvent

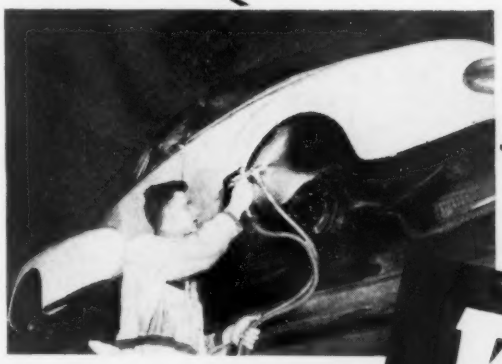
SPEED AGITENE new superfast solvent for carburetor cleaning.

"No sir, I didn't find a bottle of Bourbon in your radio."

Dealers Make Money by REDUCING NOISE!

Car undercoating is the most profitable *new service* that shops have been able to offer in ten years. Motorists want car undercoating because it stops vibration noise and prevents body bolts from working loose . . . also protects undercar parts and fenders against rust.

To make the *most* profit from this new service, use the material car manufacturers recommend—WITCOTE—because it is easiest to apply, dries quickest, and lasts longest. Ask your jobber.



WITCOTE
Reg. U. S. Pat. Off.
UNDERCAR PROTECTION
Stops Noise

WITCO CHEMICAL COMPANY

435-G N. MICHIGAN AVE.
CHICAGO 11, ILL.

ESTABLISHED
1920

OFFICES IN
PRINCIPAL CITIES

110

Willard Storage Battery Co. has introduced a new non-spill aircraft battery. Approved by the Civil Aeronautics Administration for installation without enclosed battery boxes or compartments heretofore required on all civil aircraft, this battery is made spillproof by means of a patented vent manifolding device and is protected against overfilling by an adaptation of Willard's automotive "Safety-Fill" principle to aircraft battery design. This 12 volt battery is available in two standard sizes, a 25 amp.-hr. capacity battery weighing 23½ lb., and a slightly taller battery with 36 amp.-hrs. capacity for larger engines.

(For further information see coupon on p. 53)

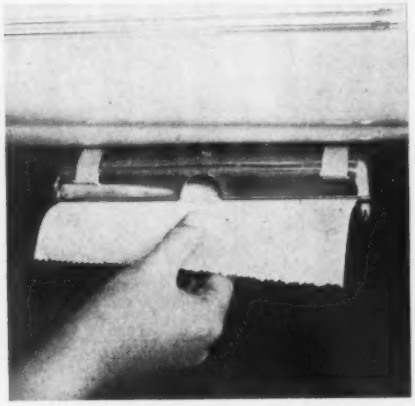
111

Turner Manufacturing Co. is featuring the special D & T Cadillac Weight. This wheel balance weight was designed specifically to meet the problem of the new large diameter Cadillac hub cap. It is designed so as to not have contact with the hub cap when in place on the wheel and yet at the same time to provide the maximum weight in the limited space available.

(For further information see coupon on p. 53)

112

Landis Manufacturing Co. has announced two new automotive accessories. These items are the Aut-O-Towl and the Auto Secretary. Aut-O-Towl is a stainless steel paper towel dispenser that fits under the glove compartment of the car. It is supplied



with attachment clips and one roll of paper equal to 50 sheets. Auto Secretary is a device that attaches to the sun visor of the car and consists of two brackets and four steel springs that hold these brackets in place on either side of the visor. One side of this unit may be used for memo pad, pencil, sun glasses and guide booklets while the other side will hold a folded map.

(For further information see coupon on p. 53)

113

Maco Corp. has introduced the "Throt-O-Matic," a new device whereby the driver, when he reaches the desired cruising speed presses an electric push button and removes his foot from the accelerator. The throttle then stays at the desired setting as long as the driver wishes. Two automatic releases are fitted which act instantly when either the accelerator or brake pedal is used. The brake pedal release is operated electrically through the stoplight circuit; the other release is mechanically activated the moment the spring tension of the accelerator is offset by foot pressure on the pedal.

(For further information see coupon on p. 53)

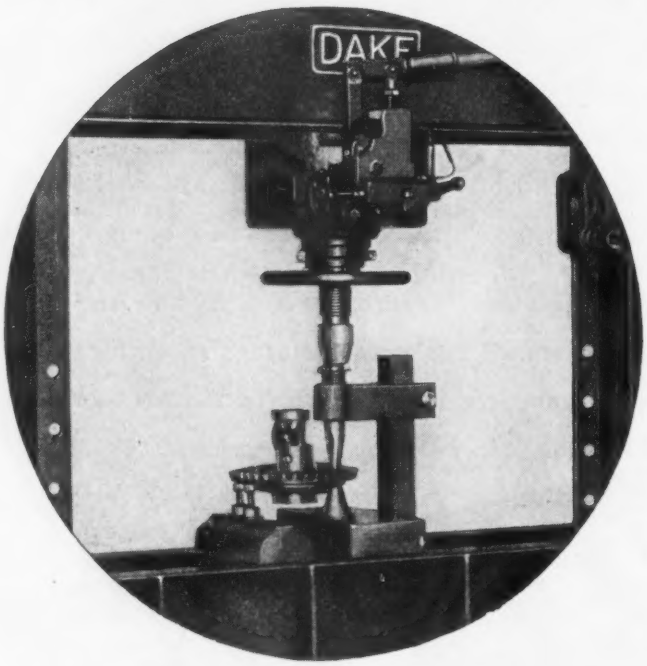
114

Whitaker Cable Corp. are now in production of their new No. 707 Spark Plug Cables. This new 7 MM heavy-duty cable contains seven copper strands of wire with heavy neoprene insulation, and according to the manufacturer affords greater resistance to the damaging elements which cause early cable deterioration such as moisture, heat, cold, oil, corona and abrasives.

(For further information see coupon on p. 53)

(*Continued on page* 170)

CLOSE-UP of a MONEY-MAKER



Are you **passing** up profitable business by not riveting **your** own ring gears? Riveting ring gears is just one way your Dake press can make money for you. A chart is furnished with each riveting attachment showing the proper size of rivets and the pressures required for riveting.

In addition to riveting, the Dake hydraulic press can be used for general press work.

Dake presses **range** in size from 1 to 75 tons capacity. This complete range of sizes makes it easy for you to select the press for your needs. All are built for long service life. Write for the new Dake catalog.

DAKE
ENGINE COMPANY
GRAND HAVEN, MICHIGAN

Dake Engine Company
626 Seventh St., Grand Haven, Mich.

Please mail me a copy of the latest Dake Arbor Press Catalog.

Name_____
Company_____
Address_____
City_____

ONE SIGN

COMPRESSION • CARBURETION • IGNITION • COOLING

RAMCO
RE-POWERING
SERVICE

Sells All 4

Ramco RE-POWERING is two things. It's a proven method of restoring power and economy to engines with Ramco 10-Up Rings and Piston Skirt Stabilizers. It's also A BETTER METHOD OF SELLING COMPLETE ENGINE REPAIR JOBS!

Ramco RE-POWERING wraps up the selling of compression, carburetion, ignition and cooling services in one package. With special advertising available to you under this plan, you PROMOTE ALL FOUR AT ONE AND THE SAME TIME. And Ramco backs you up in this 4-in-1 selling by NATIONAL ADVERTISING in the POST

It's the answer to your dream . . . for a better way . . . a more profitable way.

RAMCO 10 up Piston Rings

Products of RAMSEY CORPORATION, St. Louis, Missouri, makers of a complete line of piston rings for all automotive and industrial requirements. Factories: St. Louis, Sullivan, Mo.; Fruitport, Mich.; Toronto, Ont., Can.

Copyright 1948, Ramsey Corporation R-2525-

115

Watervliet Tool Co. is marketing a Pneumatic Piston Resizer which expands and reshapes pistons to compensate for wear and collapse. In operation this resizer delivers 8000 light blows a minute. This permits controlled expansion, enabling the operator to fit each piston carefully to its cylinder. The manufacturers state that this method toughens the piston against future wear.

(For further information see coupon on p. 53)

116

Woodworth Specialties Corp. is manufacturing a 4 in. inside indicator-Caliper. This Caliper has hollow legs, one of which encloses a spring actuated indicator hand. The pointer end of the hand comes to the outside through a slot in the leg and sweeps across the indicator marks when pressure is applied to the opposite end of the hand. With this construction there is nothing to interfere with the use of the caliper in close quarters. In use the caliper is adjusted to bring the pointer of the indicator hand to the zero mark and as the pointer

moves about twenty thousandths of an inch for every one thousandth of the contacting point, a variation of a fraction of a thousandth is readily noted.

(For further information see coupon on p. 53)

117

Globe Hoist Co. has added three new products to its line, including automatic doors which cover the floor recesses into which the rear post superstructures of a Globe 2-Post Hoist disappear when the lift is in the down position; a new Geared Electric Hoist; and the new Globe Standard Loading Lift. The Electric Hoist is available both in a free wheel and roll-on types and is very similar to the electric lifts which were manufactured by this concern before the war. It features the "pendulum" device which automatically locks the hoist superstructure should anything go wrong with the normal transmission of power through the gears.

(For further information see coupon on p. 53)

118

General Detroit Corp. has introduced a new line of safety containers called Safe Guard. Available in 1, 3 and 5 gallon sizes they are designed for the storing and carrying of flammable and volatile liquids. They are

made of terne plate, lead-coated inside and out and the pouring spout is of non-sparking die cast brass. Two larger sizes have a specially reinforced bottom to protect them against rough usage.

(For further information see coupon on p. 53)

CLEAN UP

with

A Complete Line of HARCO *Automotive Cleaners*

Made by a company with 36 years of know-how in the manufacture of cleaners and soaps, including the famous *HARCO* Green Bar Soap. The line includes:

CARBOSOLVE—A triple-action carburetor cleaner and carbon remover. Cuts cleaning time in half. Does not pit, corrode or damage metals. Meets U. S. Government specifications.

GREAS-OFF—The all-purpose degreasing solvent. Highly concentrated and emulsified. *Brush it on—Hose it off.* For cleaning engine blocks, motor parts, used car chassis, radiators, etc.

CAR WASH—A revolutionary, non-alkaline formula in powder form. Saves time because it is streakless and requires no wiping.

DRIVEWAY CLEANER—Quick-acting powder compounded for fast, easy cleaning of concrete, asphalt and wood floors, driveways and lube pits.

Contact your automotive supplier today or write us direct for further details.

HARLEY SOAP COMPANY

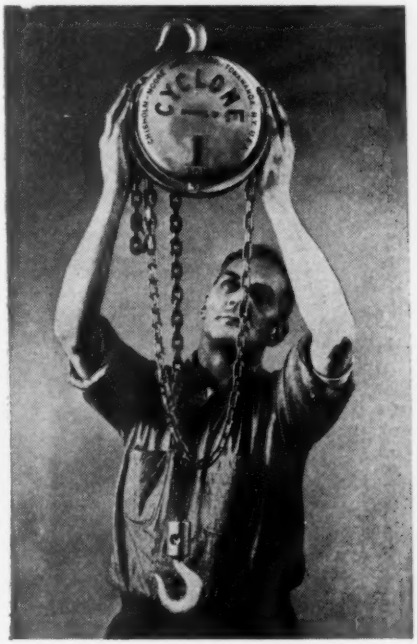
Philadelphia 37, Pa.

KEEP THE BUSINESS CLEAN

New Products

119

Chisholm-Moore Hoist Corp. is producing a line of high-speed hand-operated hoists. Through the use of steel and aluminum alloys, the weight of these hoists has been reduced to a point where they are claimed to be



nearly 45 per cent lighter than standard hoists of comparable capacity. According to the manufacturer this hoist has 42 per cent fewer parts than current hoists of the same capacity. Known as the Cyclone Model M, this hoist is available in standard capacities from ¼ ton up.

(For further information see coupon on p. 53)

120

O. E. Thompson & Sons are resuming production of their line of Champion tire grooving equipment. The heavy duty tire groover No. 301 is suitable for passenger car, truck, bus and tractor work and cuts grooves from ⅛ in. to ½ in. in width and depth. The air-cooled aluminum handle is protected from heat by nine cooling fins in series of three and the cutting blade remains at constant heat. A 250 watt heating element provides maximum heat to the Swedish steel Keen-Edge cutting blades.

(For further information see coupon on p. 53)

121

Thexton Manufacturing Co. is continuing to feature its line of automotive products including Piston Expanders, Oil Pressure Regulators, Lockring Spacers, Expansion Bolts for Delco-Remy Distributors, Re-grooving Tools for Delco-Remy Distributors, Brake Cable Repair units for Ford cars and Terminal Studs for Ford, Mercury, and Lincoln starters.

(For further information see coupon on p. 53)

(Continued on page 172)

WHY 9,000 *New* DEALERS have switched to RANKIN SEAT COVERS in one short year

This is one of the most amazing stories in the industry . . . and it's filled with new profits for YOU. A revolutionary new plan of merchandising and selling seat covers, so BIG that 9,000 dealers switched over to this Rankin Plan in ONE year. *First*, it enables you to sell de-luxe, custom-fitted seat covers at the price of ordinary non-fitted covers. *Second*, it protects you against cut-price stores, chains, mail order houses. *Third*, it gives you the smartest, most beautiful line of covers in America, for all model cars in gorgeous Lumite woven plastic. And it builds you a seat cover VOLUME that's sensational. More profits than you ever believed there were in seat covers. There's still time to get in on this BETTER setup in YOUR territory. 9,000 dealers can't be wrong. Write for the full details . . . mail this coupon NOW.

AMERICA'S FINEST RANKIN Quality The BIG NAME IN SEAT COVERS

RANKIN MFG. COMPANY
Dept. R Cedar Falls, Iowa

MAIL THIS COUPON

RANKIN MANUFACTURING CO.
DEPT. R, CEDAR FALLS, IOWA

Please send complete literature about Rankin Seat Covers and the Rankin Plan for Greater Profits.

Name_____
Company_____
Address_____
City_____ State_____

122

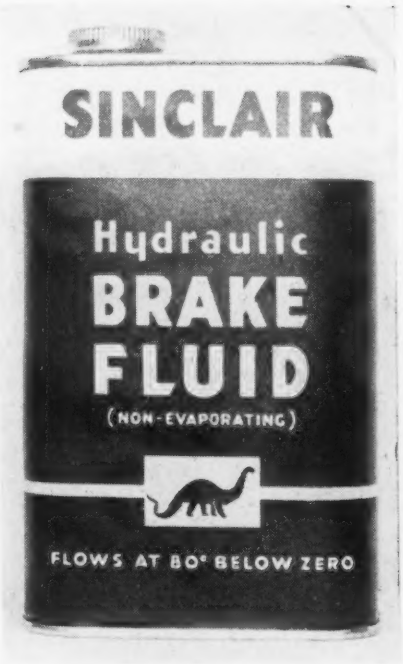
Foster and Kester Co. are featuring Sealzit, a colorless, non-inflammable liquid glass-seal for stopping window leaks. According to the manufacturer Sealzit has many other applications, including the ability to form insulation for joining wires, and is easy to apply with an eye dropper or brush. It dries in a few seconds. Sealzit clings to both the glass and molding and remains pliable.

(For further information see coupon on p. 53)

123

Sinclair Refining Co. announces the addition of 6 new Automotive Specialties to the Sinclair Line. These items include Auto Cleaner and Wax Polish which provides in one product a material to clean and wax the car finish; Radiator Flush which will remove grease, rust and lime and will not harm copper, brass, iron, steel, aluminum or rubber parts; Radiator Rust Resistor; Radiator Stop-Leak; and Hydraulic Brake Fluid which will not freeze or evaporate at temperatures ranging from 80 degrees F. below zero to 250 degrees F. above zero.

(For further information see coupon on p. 53)

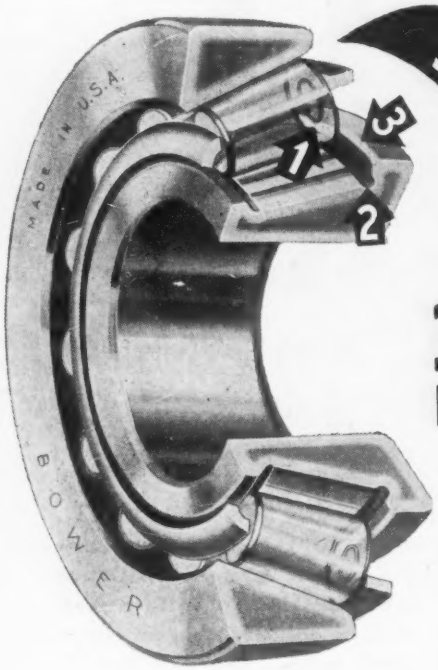


124

Trindl Products, Ltd., have added two new input type models to their "Job Tested" line of Industrial Arc Welders. These new models, 130B with a 130 amp. capacity and 180B with a 180 amp. capacity, available with and without power factor correction have been specially designed for operation on rural power lines. They are general purpose welders recommended for farm, automotive, and general industrial maintenance repair and production welding. Both are fully approved by Underwriters Laboratories and meet all NEMA and REA specifications.

(For further information see coupon on p. 53)

(Continued on page 174)



S-M-O-O-T-H

Rolling with

BOWER tapered ROLLER BEARINGS

Where quiet, dependable performance counts, Bower features pay off handsomely.

1 TWO ZONE CONTACT assures perfect alignment—squared-up roll heads.

2 EXTRA DEEP OIL GROOVE provides better lubrication—longer life. **3 ROUNDED FLANGE SHOULDERS** prevent chipping and noise—smooth contact. These, plus the famous MIRROR-SMOOTH FINISH of bearing surfaces, are assurances of long, faithful service and S-M-O-O-T-H rolling.

From your Ahlberg jobber you get complete bearing service with ball and roller bearings for every requirement, and up-to-the minute counsel on designs and applications if you desire it. See him today—or call Ahlberg.

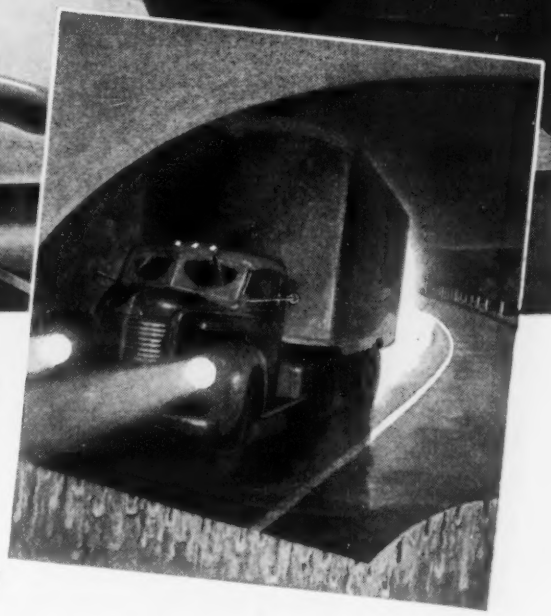
AHLBERG BEARING COMPANY

3028 WEST 47TH STREET
CHICAGO 32, ILLINOIS

"But if your wife has never driven, it would be ideal for experimental purposes."

It KILLS THAT GLARE

with the touch of a button



HERE you see just *one* reason why it's easy to sell a Trico Windshield Washer — its ability to kill glare at night by washing off the dust prisms that sparkle when oncoming headlights hit them.

Trico's "Two Little Squirts" are equally effective in making daytime driving safer and more restful by washing away muddy roadsplash, vision-diming grime. And Trico Washers are blade-savers, too, for a half-dry glass tears and "feathers" the wiping edge of the rubber.

More than *one million* car and truck installations are repeatedly demonstrating that every windshield needs a washer — and continuous Trico national advertising is multiplying public demand. Stock Trico Washers and you'll SELL them.

PRICED RIGHT FOR EASY SELLING

$6.25 PLUS INSTALLATION

Trico's special all-season solution — an added profit item — makes the Washer usable the year round except when driving with an extremely cold windshield.

TRICO PRODUCTS CORPORATION, BUFFALO 3, N. Y.

TRICO

Windshield Washers

Fully Automatic • Nothing to Pump

125

Teleoptic Co. in its new "400" series of auxiliary driving lamps, is featuring shallower construction and increased durability and finish. All doors and housings of these lamps are of brass while amber and white lenses are furnished in both sealed beam and reflector type units for splash pan and body mountings. The lamps weigh 1½ lb. each, and are packed in individual containers.

(For further information see coupon on p. 53)

126

Allen Electric and Equipment Company has added two new models to its line, one the Model E-316 Syncrograph and the Model 300 Motor Tester. The Syncrograph will make a complete test of the distributor on any model or unit. It will test for breaker point condition, insulation and leakage, cam condition, cam angle, centrifugal advance, vacuum advance, and sychronizing. The Motor Tester is a complete unit for testing starting, lighting and ignition system. Made up of separate testing units, the various testers are removable so that they can be used individually as required. Instruments included with the tester are the Condenser Tester, Volt-Amp Tester, Dwell-Tach Tester, Vacuum Fuel Pump Tester, Combustion Tester, Compression Tester, Coil Tester and Timing Light.

(For further information see coupon on p. 53)

127

General Electric is featuring four new lamps: an all-glass Head Light Lamp of increased capacity and performance; a Utility Lamp suitable for use as a back-up light or general utility light; a Spotlight Lamp which features high candlepower output and a beam spread of only five degrees; and a Fog Lamp specifically designed for trucks and motor coaches.

(For further information see coupon on p. 53)

128

Magnus Chemical Company is featuring, among its line of cleaning units, the Magnus 755 No. 6 Aja-dip Senior Cleaning Machine which takes 7 engine blocks at a time. Magnus is also featuring Magnus 755 Desludging Compound for use in automotive engines.

(For further information see coupon on p. 53)

(*Continued on page* 176)

VIXEN'S SHEARING ACTION

shows up fast!

After a few strokes with a Heller Flexible Vixen File, run your hand over the work. At once you'll note the smooth surface, even contour, good-as-new finish.

Vixen's *shearing action* does it! The curved teeth—specially milled—cut exactly right whether the file is pushed straight ahead or at an angle. You can see, from curled shavings that spiral off, that a Vixen actually *shears* its way to a smoother, scratchless finish.

What's more, with a deep undercut and ample clearance between the keen-edged teeth, this favorite of body and fender shops everywhere cuts faster, clears itself quickly of chips, needs less resharpening, lasts longer.

Only Heller makes patented Flexible Vixen Files. Widely imitated, they have never been equalled. Specify *genuine* Heller Vixens when you order from your jobber.

HELLER BROTHERS COMPANY

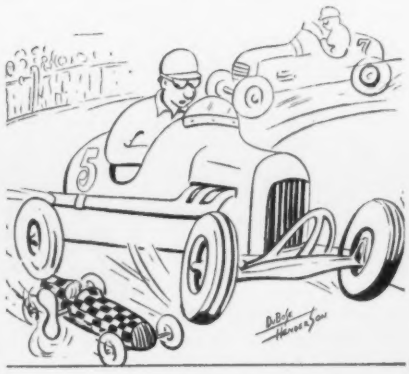
Newark, N. J. . . . . Newcomerstown, Ohio

America's Oldest GOOD TOOLS SINCE 1846 File Manufacturers

GENUINE HELLER

VIXEN

MILLED CURVED-TOOTH FILES



Announcing THE NEW *Post-War* Thompson Technical Library

Learn how you can own this complete "HOW-TO-DO-IT" Library at *NO COST TO YOU!*

In a

Handy, Indexed STEEL CABINET

27 Separate Volumes Covering Passenger Cars, Trucks, Buses, Tractors, Diesels and Industrial Engines.

Here's what you get: The *streamlined* successor to the famous prewar Thompson Repair and Tune-Up Manual! Now in 27 *separate* volumes—handier for use by more mechanics—quicker, easier for reference on most every engine and chassis job back to 1939 models. Supplementary bulletins on 1948 models come to you as information becomes available. Complete set includes 16 volumes on passenger cars, 11 volumes on heavy-duty and miscellaneous jobs. Invaluable for experienced old-timers as well as younger repairmen. Kept in indexed order, in compact, sturdy steel cabinet that hangs on wall, or sets on bench or desk, accessible to all shop personnel.

Here's how you get it: To own these "show-how" volumes and cabinet, you simply buy Thompson engine and chassis parts of your own selection—at your regular discount. Amount of purchase governs number of volumes you get. You may be entitled to full set with initial order of parts, or you may start assembling your library with several or even a single volume. Cabinet comes to you in any case. Choose any volumes you want. Buy your parts—order your volumes from your Thompson jobber. Your cabinet, volumes and the parts you select will be shipped direct to you from the nearest Thompson warehouse.

YOUR BEST BET FOR FASTER, BETTER, MORE PROFITABLE REPAIR JOBS!

See Your **Thompson Products** *Distributor*

CLEVELAND · DETROIT · LOS ANGELES

129

Gray-Mills Corp. has introduced a new Model 8 Wet Cutting System. Completely self-contained with an electric motor-driven pump with which the motor is included, the entire unit sets on the bench. One stone is used and a continual flow of honing oil is delivered to the stone which flushes away grit and keeps the work cool. There is a baffle to settle out grit and metal particles.

(For further information see coupon on p. 53)

130

Air Reduction Sales Co. has announced a new, water-cooled manual Heliweld holder. This new holder, designed for continuous production work with the inert-gas-shielded arc welding method features water cooling; an all-plastic exterior insulated for maximum protection; a gas cap made of non-conducting material and a light, flexible cable encased in a translucent plastic cover. The holder cable is sufficiently long to permit freedom of movement and rugged enough to withstand hard usage. This holder has a current capacity of 300 amperes AC or DC.

(For further information see coupon on p. 53)

131

Electric Storage Battery Co. has announced a new merchandising program for 1948. A featured unit in this plan is the newly designed Exide Merchandiser, with Keepacharge, in

two sizes—the DeLuxe which displays and maintains 9 batteries, and the Standard size, which displays and maintains 6 batteries. The Keepacharge is a tricklecharger that keeps the stock on display in a fresh, fully charged condition. The new Exide battery, the Hycap, the Sure Start and the Startex are also being featured as part of the new campaign.

(For further information see coupon on p. 53)

132

Moog Industries, Inc. have augmented their line of automotive replacement parts with a line that includes shackles, king bolt sets and kits, tie rod ends, intermediate rods and drag links. These parts as well as the Moog coil action front end parts line, electrically heat treated springs and Moog X-Plus Piston Rings are now being packaged in a new series of packages that feature a color scheme of blue and buff and in the case of the Piston Ring line in blue, silver and gold.

(For further information see coupon on p. 53)

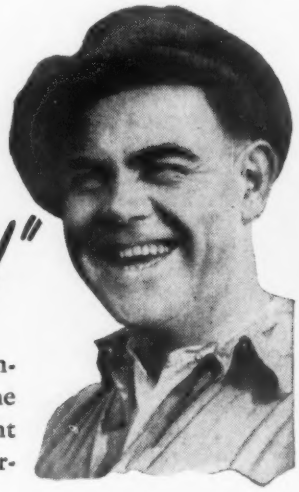
133

Witco Chemical Co. is featuring Witcote, a sound deadening material formulated for spraying the underside of the car. It is similar to the bituminous material used by car manufacturers. According to the manufacturer Witcote provides a coating impervious to water, acids and road chemicals.

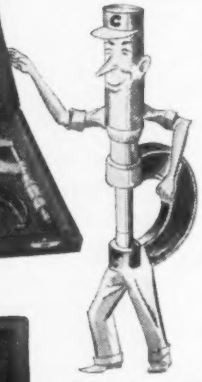
(For further information see coupon on p. 53)

(Continued on page 180)

"Give Me CENTRAL Mikes ...guesswork doesn't pay!"



Motor mechanics rely on CENTRAL Micrometers — the largest selling micrometers in the automotive field. They know that fits are right the *first* time, *every* time, when CENTRAL Certified Accuracy checks the size.



CENTRAL Mike says —

"Tackle any job with these two sets!"

SET No. 745-RL

Outside Micrometers. Range: 0 to 4 inches by thousandths. Four micrometers, complete with Ratchet Stops, Lock Nuts and Standard Test Gauges in De Luxe Plush-Lined Case.

SET No. 808

Inside Micrometer. Range: 1½ to 8 inches by thousandths. Complete with Extension Handle in De Luxe Plush-Lined Case.

There's a CENTRAL Micrometer for every requirement. See your Jobber or write for Catalog.

THE CENTRAL TOOL COMPANY
462 WELLINGTON AVE., CRANSTON 10, R. I.

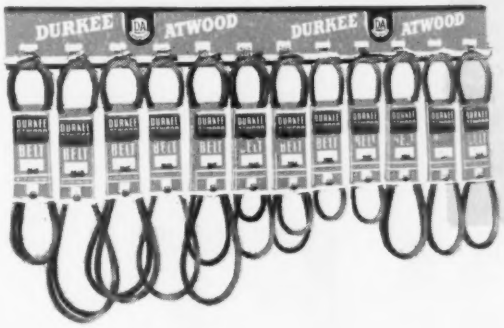
CENTRAL
Certified Accuracy
MICROMETERS

FOR HALF A CENTURY SPECIALISTS IN FINE MICROMETERS

RIGHT! for MODERN MERCHANDISING

DURKEE-ATWOOD OFFERS A COMPLETE LINE OF AUTOMOTIVE PRODUCTS UNMATCHED BY ANY OTHER SINGLE MANUFACTURER . . .

- INCLUDING BOTH CHEMICAL AND RUBBER PRODUCTS
- PACKAGED UNIFORMLY AND SMARTLY
- FEATURING EXCLUSIVE, FAST-MOVING ITEMS
- BACKED BY AGGRESSIVE PROMOTION AND ADVERTISING



NEW POINT-OF-SALE HELPS

The all-steel Durkee-Atwood belt rack is typical of the *practical* merchandising aids we supply. Counter displays, window streamers, newspaper mats, size charts, self-serve racks, and many other sales helps assist dealers and jobbers with their sales problems.

The Durkee-Atwood line is profitable for you because each item is a good buy for your customers. Every product is laboratory tested, backed by 35 years of manufacturing experience. Durkee-Atwood products do the job . . . pave the way for repeat sales. Now . . . these top-quality products are being promoted as never before with aggressive promotion and advertising.

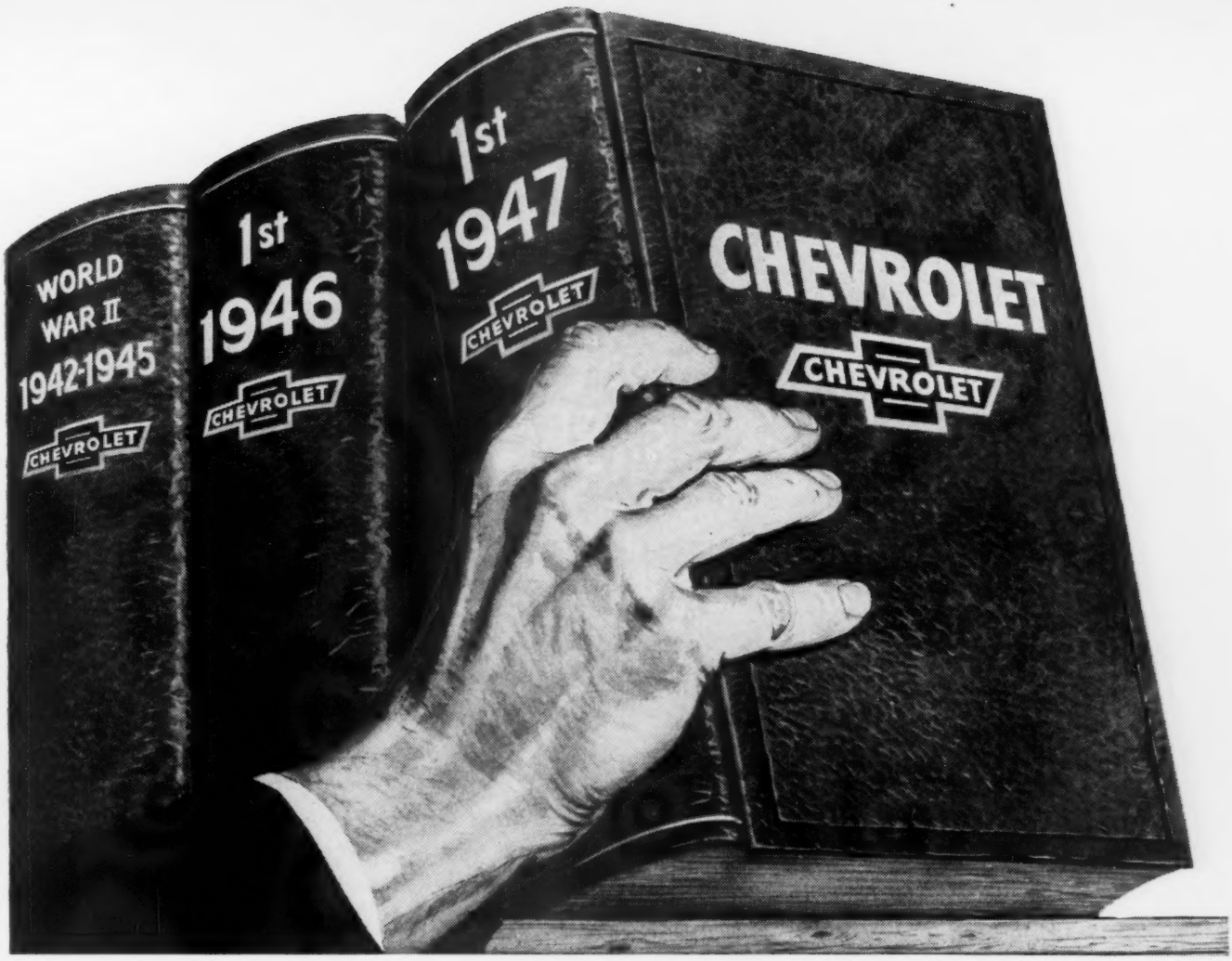
Look ahead to better business . . . more profitable business in 1948. Tie up with the complete Durkee-Atwood line.

DURKEE ATWOOD

AUTOMOTIVE PRODUCTS

MINNEAPOLIS 13, MINNESOTA

Again
CHEVROLET LEADS THEM ALL!



The only maker producing more than a million cars and trucks in 1947!

Again in 1947—with people everywhere urgently needing new passenger cars and trucks—official figures prove that the Chevrolet Motor Division of General Motors led all other manufacturers in automotive production; and, in addition, Chevrolet was the *only* maker producing more than a million units during the year.

Thus, the builders of Chevrolet produced *more cars* and *more trucks* than any other manufacturer in 1947—just as they did in 1946—and just as they did in the *eleven-year period* dating from January, 1931 to January, 1942!

This means that Chevrolet leads the way in helping to meet America's continuing automotive shortage. But production to date has not been nearly high enough. Consequently, Chevrolet and its dealers have been unable to meet the needs of hundreds of thousands of people who have purchased—and countless others who would prefer to purchase—new Chevrolets, if a sufficient number of these products were available.

However, the Chevrolet Motor Division and the entire Chevrolet dealer organization are continuing to fill orders *just as rapidly* as they possibly can!

Naturally, that is the most practical and effective way for Chevrolet, and for Chevrolet dealers, to merit the fine national preference which lies back of Chevrolet's record of being first in passenger-car production and first in truck production, again in 1947.

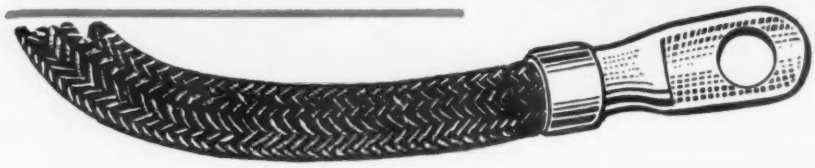
CHEVROLET MOTOR DIVISION, *General Motors Corporation*, DETROIT 2, MICHIGAN

Going Forward Together CHEVROLET *You and* **CHEVROLET**

TROUBLE-FREE Service
SNUG Terminal Fit
LONGER Cable Life

WITH... BOWES SEAL FAST

CORRODELESS TERMINALS



Most battery cable trouble starts at the terminal because of corrosion or bad fit. Bowes "Seal Fast" battery cable terminals positively will not corrode and the specially engineered tailor-made fit assures longer cable life.

Stop cable trouble before it starts.

You will make friends . . . and money . . . with Bowes trouble-free battery cables.

BOWES SPARK PLUGS
CAN TAKE IT!

Don't overlook this quick, easy-to-handle profit item. You can sell Bowes Plugs with confidence!

BOWES SEAL FAST

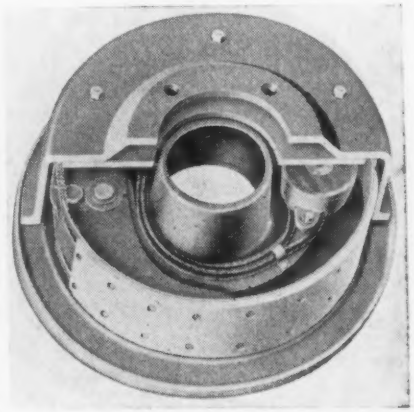
BOWES "SEAL FAST" CORP.
INDIANAPOLIS 7, INDIANA

New Products

(*Continued from page* 176)

134

Kelsey-Hayes Wheel Company have added two new products to their line, the Vacdraulic brake power unit for passenger cars and trucks, and Magdraulic electric brake units for house



trailers, wagons and industrial equipment. The Vacdraulic is a vacuum suspended, double line unit. The effect of this construction according to the manufacturer is to "poise" the valve so that a very slight movement of the control piston either way will cause one or the other of the valves to operate. The Magdraulic features a unique lever that is always in light contact with armature disc to prevent lag and insure instantaneous action.

(For further information see coupon on p. 53)

135

South Bend Lathe Works have issued their new, revised edition 45 of the lathe operator's handbook "How To Run A Lathe." A number of changes in text material and illustrations have been made since the previous edition was printed in 1944. This book contains the latest information on the operation and care of metal working lathes. It covers such subjects as the operation of the lathe units, grinding cutter bits, making accurate measurements, plain turning, chuck work, taper turning, boring, drilling, etc. This edition contains 128 pages and over 365 illustrations.

(For further information see coupon on p. 53)

136

New England Auto Products Corp. have announced a new line of Plain and Needle Bearing Power Take-Off Joints, known as the 1500-1600 Series. Constructed of solid forgings, they are available in 5 in. standard length (short yokes) or 8 in. slip assembly (one long yoke). Production quantities of joints in special lengths, or with special bore sizes, are available on request. These PTO's are made from solid forgings, not welded assemblies. An outstanding maintenance feature is the replaceable journal assembly, which eliminates complete joint replacement.

(For further information see coupon on p. 53)

(*Continued on page* 182)

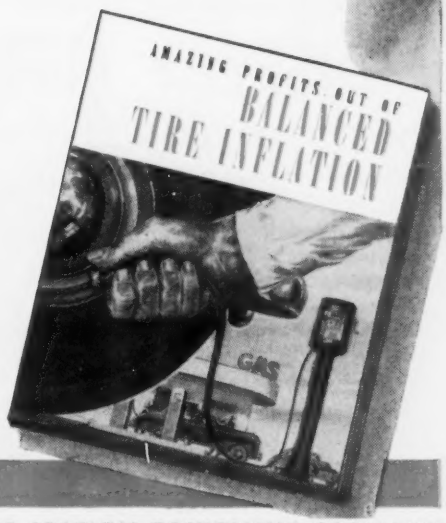
HOW TO MAKE STEADY CUSTOMERS OUT OF *Floaters*

This Book, Yours for the Asking, Tells You How

What percentage of your customers are floaters? Twenty percent? Thirty percent? Perhaps fifty percent? True, it's probably not the exact percentage that interests you—but, a sound solution for turning a good many floaters into steady customers *will* interest you!

You'll find this solution, along with many other profit-building points, in Eco's new book "Amazing Profits Out Of Balanced Tire Inflation."* Read this book and you'll be surprised to learn how a *free* service can actually build important profits through time-saving, good-will and the sale of tires and other regular service station products and services.

Of course the answer to these profits lies in the new Eco Tireflator and Eco's original BALANCED INFLATION* program that deals with—but telling more would spoil your enjoyment. Better read the complete story for yourself in Eco's new book. *Send for it today—and profit from it tomorrow!*



SERVICE STATION EQUIPMENT COMPANY · MUSKEGON, MICHIGAN
QUALITY BUILT Bennett
PRECISION BUILT ECO

SERVICE STATION EQUIPMENT COMPANY
MUSKEGON, MICHIGAN

Send me your new, FREE book, "Amazing Profits Out Of Balanced Tire Inflation." MA

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

*Copyright 1947 Service Station Equipment Company

137

Champ-Items, Inc. are offering a new assortment of S.A.E. Lock Nuts containing 108 of five assorted sizes from ¼ in. to ½ in. No lock washers or cotter pins are required with these Lock Nuts. They are all steel, one piece, and are not affected by heat or oil. They lock in any position and will fit any standard wrench. This assortment is known as the No. 566 "Champlock" Lock Nut Assortment.

(For further information see coupon on p. 53)

138

Accurate Parts Manufacturing Co. has introduced a new clutch plate which incorporates several new and exclusive features. The disc itself is made up of completely separated segments. Each segment is formed with opposing flat-surface crimps to afford support to an increased facing area. According to Accurate the contour of the segment has a larger area of flat surface, therefore there is more actual contact between the disc and the facing than is usually found in cushion type discs. Larger coil springs are used on this Powerflex plate in combinations with Accurate's patented spring supports. The hub splines are chamfered or pointed so that the transmission shaft splines align themselves automatically with the splines in the clutch hub when it is inserted.

(For further information see coupon on p. 53)

139

Rinck-McIlwaine, Inc., is featuring a new merchandising Display Cabinet for Rimac Hexsets taps and dies. This unit features the combination Hexset

No. 77, containing eleven taps and dies, die stock and universal tap wrench. The cabinet is all metal containing thirteen drawers with provision for suitable jobber stock of all sizes of taps and dies actively used in garage work.

(For further information see coupon on p. 53)

140

Auto Specialties Manufacturing Co. has introduced a new line of jacks, including the new two-ton Ausco Hydraulic Floor Jack and the new Ausco 1½-ton Curb Jack. The floor jacks feature finger-tip control, instantly removable handles and fully enclosed operating mechanisms. The hydraulic bumper jack which is included in the Ausco line features adjustable finger-tip control, removable piston assembly, attached handle with rubber grip and a large detachable swivel base.

(For further information see coupon on p. 53)

141

United Parts Manufacturing Co. is featuring a merchandising unit called the "Necessary Nine" Assortment. This assortment includes nine universal cable and casing assemblies for speedometer cable service complete. And, according to the manufacturer eliminates measuring, cutting, adjustments, and fitting.

(For further information see coupon on p. 53)

142

Cole-Hersee Co. are producing the new improved 110 volt Trailer Connector. Made of bakelite and designed to resist weather and corrosion, this unit consists of a socket which is

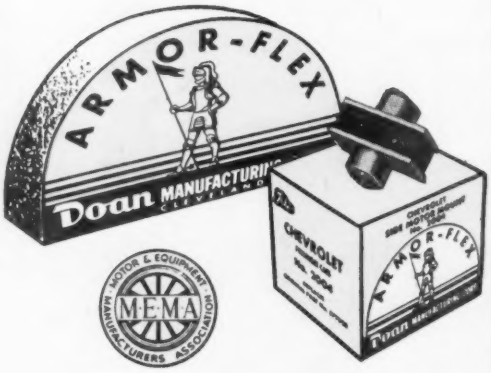
(*Continued on page* 184)

WITH THE NEW DOAN

DISPLAY MERCHANDISER

It's easy as 1-2-3* With this entirely new and different Doan display merchandiser, you will make (1) greater profits, (2) quick self-service sales, and (3) colorful eye-catching displays for fast turnover. Handy replacement chart on back panel ends all guesswork. Display easily moved on wheels at rear. Holds 18 floor mats, 36 pairs pedal pads, 19 accelerator pedals. Overall size 32" wide x 25" deep x 58" high. Ideal for both jobber and dealer use.

Ask your local jobber for complete details.



DOAN
MANUFACTURING CORP.
1644 Doan Ave.
Cleveland 14, Ohio

PACKAGED AUTOMOTIVE REPLACEMENT PARTS

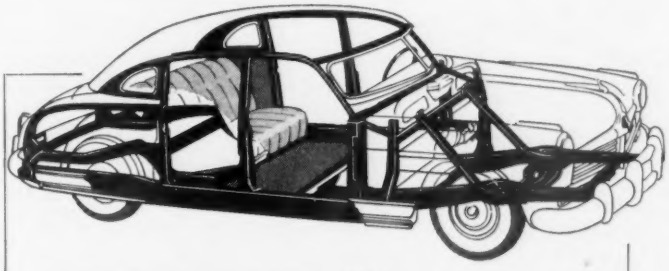
Now...you're face to face with Tomorrow!

It's here—the car you've been told was years away!

A style-setting beauty that is only five feet high and has the lowest center of gravity you've ever known, yet provides more inside head room than any other car built today.

A car with the roomiest seats ever built into an American-made automobile. A car that you step *down* into, not up on—yet one that maintains road clearance.

The new Hudson features a basic new development in motor-car design—the new, all steel Monobilt body- and frame, illustrated below.



A CAR YOU RIDE IN...NOT ON!

Hudson is *the only* motor car that completely encircles you with a rigid box-steel foundation frame—you ride inside the frame, instead of on top of it as in other cars. And every unit of Hudson's new, all steel Monobilt body-and-frame is welded into *one solid structure* that provides unusual rigidity and stability.

This car is powered by Hudson's all-new Super-Six engine—the most powerful six built today—or Hudson's masterful Super-Eight. Optional with either is Hudson's exclusive Drive-Master—no clutch pushing, no gear shifting in forward speeds.

The motor car of tomorrow is gorgeously upholstered, generously equipped with beauty, comfort and convenience features, including a new type of low-pressure, Super-Cushion tire.

This car is something to see . . . and ten million people jammed Hudson showrooms throughout the country the first week it was on display!

All this, but only in Hudson!

Choice of new Super-Six engine, the most powerful six built today, or masterful Super-Eight engine.

Wide curved-glass windshield and rear window, more vision all around.

Hudson Drive-Master, no clutch pushing, no gear shifting in forward speeds.

Triple-Safe Brakes, finest hydraulics with mechanical reserve system; handy parking brake.

Weather-Control, constantly changing, conditioned air; no steamed-up or frosted windows.

The New Hudson

screwed (not riveted) to a rustproof flanged carrier which has a swinging snap-on cover to keep out rain. The diameter of the body is 1⅝ in.

(For further information see coupon on p. 53)

143

Black & Decker Manufacturing Co. has introduced a line of "Home-Utility" Portable Electric Drills, to sell at popular prices. The "Home-Utility" Drills are available in two capacities ¼ in. and ½ in. They drive twist drills, wood drills, hole saws, countersinks, wire brushes, abrasive pads and sleeves. Both drills are powered by universal motors and have die cast aluminum housings.

(For further information see coupon on p. 53)

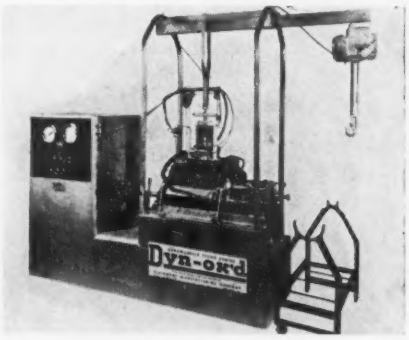
144

Monroe Auto Equipment Co. is featuring its Airplane Type shock absorbers and conversion sets, the new E-Z Ride economy line of shock absorbers and conversion sets, and the new E-Z Ride tractor and truck seats. The E-Z Ride line has been put forward as a companion in the replacement market to the standard equipment Monroe Airplane Type direct action shock absorbers which continued to be featured as the company's leading line. Conversion sets in both lines are made for Ford, Chevrolet, Lincoln, Mercury and Studebaker cars.

(For further information see coupon on p. 53)

145

Clayborne Manufacturing Co. is now in production of their Model No. 1000 Dynamometer. New features include a fully enclosed base constructed of boiler plate and with plas-



tic undercoatings applied to the inner flat surface. Mounting assemblies for handling short block assemblies are removable as units, and are interchangeable. With special short block mounting assemblies removed, the Dynamometer is universal and will run in and test any ready to run engine within the size and capacity of the machine.

(For further information see coupon on p. 53)

146

Aro Equipment Corp. has introduced a new series of units to be known as the Aro Supreme Line. These lubricating units feature indirect lighting and a newly designed bin type cabinet that permits complete concealment of hose and service assemblies when not in use. A faster change of grease drums has been devised, the bin front being removed, the cabinet top opened and the pumping unit raised until it locks automatically into position. The oil drains also have been improved, the funnel being concealed when not in use but readily accessible by opening the cabinet top. These new Supreme Models are 20 in. wide, 22 in. deep and 46 in. high and are designed for use with the original 100 lb. drums.

(For further information see coupon on p. 53)

147

Brunner Manufacturing Co. is now producing the V-632, 1½-hp. Single Stage Air Compressor. The manufacturers claim high efficiency, freedom from operating troubles and low power consumption for this model. Brunner is the manufacturer of a complete line of single and two-stage compressors from ¼ to 10 hp.

(For further information see coupon on p. 53)

(Continued on page 186)

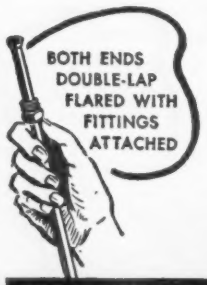
For MORE profits . . . . . for SAFER brake jobs
INSIST ON
Ready to Install
BUNDYFLEX
RIGID METAL HYDRAULIC BRAKE LINES

Original Equipment on Every Car and Truck since 1935

90% OF ALL REPLACEMENTS can be made from this new, fast-selling

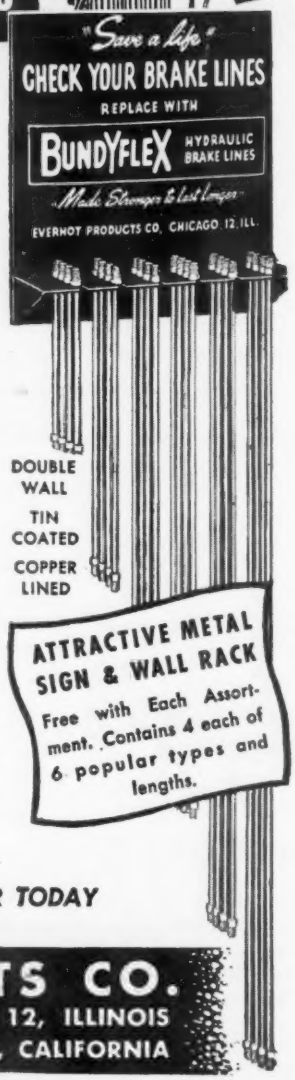
No. 475 DEALERS DISPLAY ASSORTMENT

Handle those urgent hydraulic brake line jobs promptly . . . and profitably with Bundyflex ready-to-install brake lines. No more hunting for the right tubing or fittings; no more tube cutting or flaring. In a few minutes, you've duplicated the *original installation* with one of the 6 popular numbers from your handy Bundyflex assortment.



Extra long lines easily made with EVERHOT 300C ¼F x ¼F inverted flare union.

LIST PRICE EACH $14.80 DEALER PRICE EACH $9.85



ATTRACTIVE METAL SIGN & WALL RACK
Free with Each Assortment. Contains 4 each of 6 popular types and lengths.

ORDER FROM YOUR JOBBER TODAY

EVERHOT PRODUCTS CO.
2001-9 W. CARROLL AVE., CHICAGO 12, ILLINOIS
1511 W. SEVENTH ST., LOS ANGELES 14, CALIFORNIA

You can start and finish with the best

SPECIFY SHERWIN-WILLIAMS AUTOMOTIVE FINISHES

One high standard of quality . . . *one* complete automotive finishing line—from Primers to the finish coat in both Opex Lacquers and Kem Transport Enamels—that's why it pays to see Sherwin-Williams O-K Distributors for *all* your finishing needs.

Calling on your O-K Distributor may well mean the answer to your refinishing problems! Discover the way to get the best possible finishes in the shortest possible time!

Remember, too, that Sherwin-Williams maintains a complete Color Service consisting of a staff of color experts ready to confer on *any* automotive finishing problem you may have. This in addition to the Color Meter Service described on the right.

THE SHERWIN-WILLIAMS CO., CLEVELAND 1, OHIO

COLOR METER SERVICE

Each Sherwin-Williams O-K Distributor is equipped with a complete Color Meter Service. With this service he can supply you with any color for all cars since 1935!

Any *special* colors are first factory-formulated by Sherwin-Williams, then referred to your O-K Distributor for your future use.

SHERWIN-WILLIAMS
AUTOMOTIVE FINISHES

148

Duro Metal Products have introduced a new line of Duro-Chrome Tools. One of these tools is a 3-in-1 Battery Terminal Lifter and Wrench incorporating a 12-point 9/16 in. box wrench in the handle. On the other end of the wrench, there is a spreader point for forcing the terminal apart after the bolt nut has been loosened. Thin lifter fingers slip under the terminal and by cam action lift it from the post. The other new tool is the Duro-Chrome "80" Tooth Action Reversible Ratchet Wrench. A ratcheting take-up of less than 5 degrees can be made with this wrench.

(For further information see coupon on p. 53)

149

Dake Engine Co. has announced a new series of air-operated presses. There are but two valves for the operator to manipulate to obtain the pressure desired and all force is provided by the air pressure. They are available with either of two style pumps. One style provides a rated tonnage of the press at 145 lb. air pressure; the other at 90 lb. air pressure. The new series of presses are available in 25, 50 and 75 ton capacities.

(For further information see coupon on p. 53)

150

United Motors Service has introduced a new Delco auto radio. Outstanding feature of this set is the Electro-Tuner Control, a device which

makes push-button tuning and dial tuning unnecessary. With this control, mounted on the steering column, a touch of the driver's finger will "trap" and tune in stations, one by one, automatically. This type of tuning according to Delco is based on a "trigger tube," which sets up a separate sensitivity field and tunes in the stations electronically.

(For further information see coupon on p. 53)

151

American Chain Division of American Chain & Cable Company is featuring its new Weed American V-Bar Tire Chains. The manufacturer claims more than double the mileage of ordinary tire chains because the V-Bars used on this chain are double-welded to the contact links of the cross chain, thereby giving twice the metal to wear through. Chains for trucks and buses are included in this line and are made for Single and Dual Pneumatic tires. Special chains for tractors are also available.

(For further information see coupon on p. 53)

152

Crescent Co. are featuring, in addition to their maroon battery cable their No. 90-09 high tension ignition cable made especially for heavy duty busses and trucks. This cable is especially designed for pancake engines where the cable lies on top of a hot block.

(For further information see coupon on p. 53)

153

DeVilbiss Company's newest product is an all-steel Paint Shop for truck work. An easily erected, free-standing structure which incorporates scientific ventilation with the exhaust and air filters balanced for dust free air, this special spray booth is fitted with fluorescent light fixtures. Six standard sizes accommodate all conventional commercial vehicles.

(For further information see coupon on p. 53)

(Continued on page 188)

Starter and Generator BEARINGS

from stock

Immediate delivery from stock is now possible on Johnson Bronze Starter and Generator Bearings for all popular makes of cars, trucks and buses. The same is true of related parts such as water pump, steering knuckle, clutch pilot, propeller shaft, spindle and spring bushings. And every item in the line is the same, genuine top quality . . . identical in precision and finish with original equipment. There are no second or third grades of Johnson Bronze merchandise.

Twenty strategically located warehouses are ready to serve you. Why not check over your needs now? Then send in your order. Let us prove our excellent service. The bearings will prove their quality through performance.

New Catalogue

Lists and describes a complete bearing service for all cars and trucks. It's FREE.

JOHNSON BRONZE
SLEEVE BEARING HEADQUARTERS
455 S. MILL STREET NEW CASTLE, PA.
The MOST COMPLETE SLEEVE BEARING SERVICE in the WORLD

Look for these labels!

. . . YOUR CLUES TO SEAT COVER PROFITS!

On the carton . . . on the fabric . . . these new labels identify TEXTILENE SUNSURE fibre fabrics . . . America's leading seat cover materials. These labels are your assurance of seat covers that will sell at a profit. They're your assurance of satisfied customers.

Throughout 1948, regular advertising in the *Saturday Evening Post, Time, Business Week,* and *Fortune* will tell millions of motorists to look for the TEXTILENE SUNSURE label on the seat covers they buy.

TEXTILENE SUNSURE fabrics are also obtainable with vinyl-coating for longer wear and better appearance. They're easy to slide over. They're smooth, and can't snag stockings.

A special process, exclusive with TEXTILENE SUNSURE, keeps colors sparkling and cheerful for the life of the fabric. Even under the glare of the FADE-OMETER, these fabrics stand up for 200 continuous hours without objectionable fading. They're twice as sun-resistant as better-quality curtain materials.

More than 200 leading makers of seat covers are now using TEXTILENE SUNSURE fabrics. They're made right. They fit right. They're priced right.

We'll be glad to give you the name of one or more manufacturers near you who use TEXTILENE SUNSURE. E. W. TWITCHELL, INC., Third and Somerset Sts., Philadelphia 33, Pa.

WHEN YOU BUY SEAT COVERS—SAY *Sunsure* . . . TO BE SURE

TWITCHELL

Paper Products for Industry

TWISTED
FOLDED
PRESSED
CRUSHED
SHAPED
BRAIDED
WOVEN

154

Airtex Automotive Division of Chelford Master Manufacturing Company, Inc., has improved its line of Airtex Fuel Pumps by the incorporation of new tight-seal valves. This new construction eliminates the need for internal gaskets and prevent valve failure due to gasket deterioration. Each valve feed surface is furnished to insure the maximum degree of contact with the valve disc.

(For further information see coupon on p. 53)

155

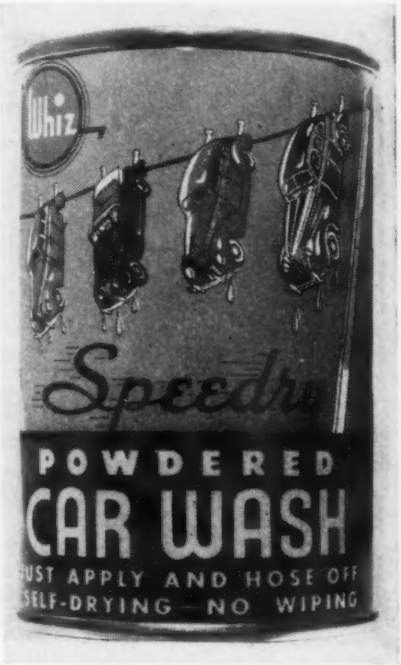
Marquette Manufacturing Company, Inc., is now producing their new Hi-Rate "Fleet" Charger, Model 188. This dual purpose 6 and 12-volt 100-amp. charger, designed for Fleet Owners, Truck and Bus Operators is controlled by switch for either 6 or 12-volt charging at full 100 amp. rate. Other products featured in the Marquette line include the new Marquette Manual Tow Crane Model 140N, which features a two-speed winch with pressure lubricated roller and Oilite bearings and a new Crane Tow Bar which acts as a space bar between tow car and car being towed in.

(For further information see coupon on p. 53)

156

R. M. Hollingshead Corp. has introduced two new products, a Protective Underbody Coating and a powdered soapless car wash in concentrated form. The coating known as Whiz P.U.C. is described by the maker as a hide-like covering which can be applied with standard equipment and dries quickly to form a weather-proof protective coating. It has a high flash point and is free from noxious odors. Powdered Speedry Car Wash produces suds when dissolved in water and is designed to loosen road film and dirt.

(For further information see coupon on p. 53)



157

Snap-On Tools Corp. has introduced a new Hydra-matic Transmission Adjusting Wrench especially designed for use on Oldsmobile and Cadillac hydra-matic adjusting fan screw and lock nut. The new tool is a dual purpose wrench having a 5/16 in. square socket within a ¾ in. double thick socket. The double thick socket fits the lock nut, while the square socket is used to adjust the hand adjusting screw.

(For further information see coupon on p. 53)

158

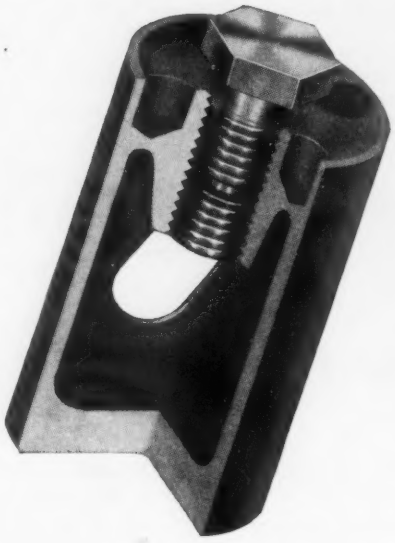
Standard Thomson Corp. is featuring the Thomson Sealed Beam, Pistol Grip Spotlight. Two sizes, with 5 in. and 6 in. heads, are available in this Spotlight which has full 360° rotation controlled by a Pistol Grip Handle and switch. It has solid brass head and chrome covered, die cast housing and fits all cars by means of a universal mounting bracket.

(For further information see coupon on p. 53)

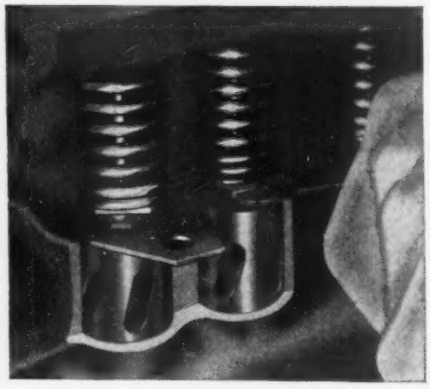
(Continued on page 190)

V-8 VALVE JOBS MADE EASY!

WITH Johnson ADJUSTABLE TAPPETS



Do the job right! Install Johnson Adjustable Tappets in Ford and Mercury V-8's (85-100 HP engines). No expensive shop equipment is needed. Installations are made in half the ordinary time and without the task of fitting valves. Special spanners are included with each set of tappets, leaving both hands free for quicker and more accurate adjustments. Each tappet maintains its setting and gives many thousands of miles of superior engine performance.



The millions of Johnson Tappets in use today are giving dependable service and providing smooth, quiet engine performance.

You'll find that you will make larger profits and gain more satisfied customers when you install Johnson Adjustable Tappets.

AVAILABLE AT N.A.P.A. WAREHOUSES AND JOBBERS

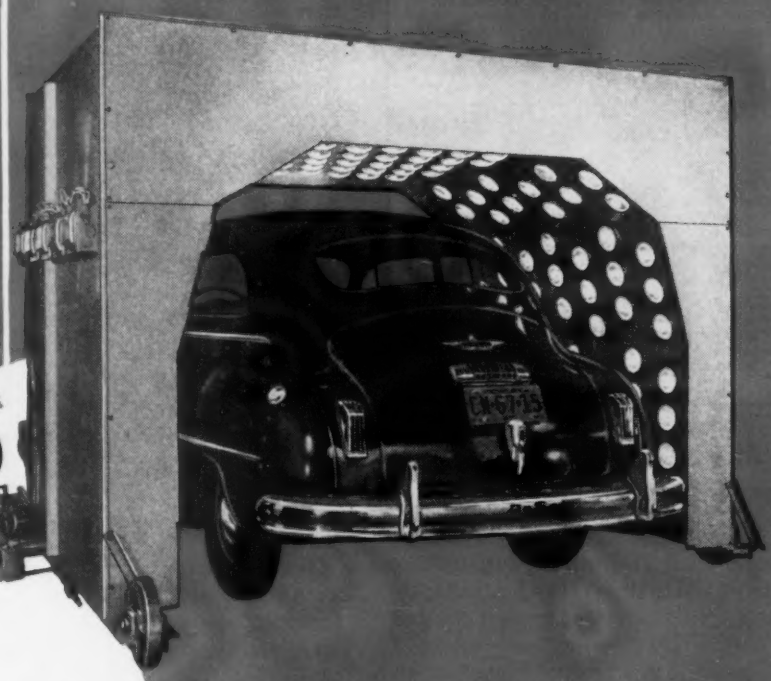
Johnson PRODUCTS INC.
MUSKEGON, MICHIGAN
"Tappets Are Our Business"

Briggs PRODUCTION

New BRIGGS INFRA-RED UNIT CUTS AUTO PAINT DRYING TIME TO 15 minutes!

POSITIVE

Now it's easy to give cars real factory finish with factory speed and quality. The new Briggs unit does the job with economy, flexibility, convenience, speed, and ends dust and humidity problems. Handles touch-up work as well as complete jobs.



NASH-STEELE MOTOR COMPANY, INC.

DISTRIBUTOR FOR CHRYSLER CORPORATION PARTS AND ACCESSORIES

Dodge Plymouth

DODGE Job-Rated TRUCKS

COR CABARRUS & McDOWELL STS.
RALEIGH, NORTH CAROLINA

27 October 1947

File No. 1331-S

Mr. T. W. Edwards, Asst. Sales Manager
Refinishing Materials Division
Briggs Manufacturing Company
Detroit 11, Michigan

Dear Mr. Edwards:

The new Infra-Red Baking Oven has now been in operation for about two months in our Paint Shop and we are so enthusiastic over it that we are taking the liberty of writing a letter to you, outlining the advantages of this oven over the regular Air-Drying method.

After the car has been painted with Briggs BE Baking Enamel and placed under the oven for about fifteen minutes, the paint is thoroughly dry and comes out with a hard, smooth finish, with a brilliant luster. By using Briggs Baking Enamel and drying it with Infra-Red process, the refinished job is almost identical with a new car produced by the manufacturer.

We have tried other makes of paint but none comes out as satisfactorily as Briggs BE Baking Enamel - which we are now using.

This oven uses about 60 kilowatts of electricity per hour and, based on our rate here, it costs us about 20 cents per car. Work in the paint shop is speeded up tremendously and much expense and time and space is saved, using the Infra-Red oven. If we had the available space and dry at rough men to prepare the cars for painting, we could paint and dry at least fifteen to eighteen cars per day. With two men spraying and with the use of the new oven, we can paint and dry a car in thirty minutes.

I would heartily recommend the use of the Infra-Red Oven and Briggs BE Baking Enamel for any dealer who wants to go into the body and paint work on a large scale.

With kindest personal regards, I am

Yours very truly,
Nash-Steele Motor Co., Inc.
P. E. Steele

PES/ego

NEW BRIGGS BE BAKING ENAMEL MANUFACTURED FOR THE JOB

In addition to the famous Brix-Fix Lacquers and Briggs Quick Dry Enamels, the third member has now been added. Briggs-BE-Baking Enamel Finishes in most popular production colors for standard makes of cars. A new addition to Briggs famous line of Lacquers, Synthetic Enamels, Thinners, Primer Surfaces, and other refinishing materials.

AUTOMOBILE BODY BUILDERS & FINISHERS SINCE 1909

AND HERE'S MORE Proof

Very definite proof that you'll profit with Briggs-BE-Baked Enamel, and the new Briggs Infra-Red Unit. Ask your Briggs distributor today. Get in on bigger paint profits. See your Briggs distributor or write for literature.

BRIGGS MANUFACTURING CO.

REFINISHING MATERIALS DIVISION
DETROIT 11, MICHIGAN

Four "Profit Makers" for Every Shop

There are four cleaning operations that you can sell to almost every customer. These same four cleaning jobs, when carried out by Magnus methods, using Magnus materials, will net you plenty!

NEW CLEANING IDEAS

For Further Details Write Magnus

Your Rest Rooms Are a Part of Your Business. Make sure they look clean and smell clean by using Magnus 55-P, the solvent soap with the pleasant pine smell. It disinfects and deodorizes as it cleans. And how it cleans! No. 57

Got Your Copy of This "Profit Bulletin" Yet? If you haven't asked for your copy of "Profitable Engine Desludging," do it now. It goes into complete details on one of the most attractive sources of profit you have today. No. 58

There's No Excuse for Dirty, Greasy Concrete Floors when Magnus Cement Cleaner is ready to do such a fast, complete and economical job. Mighty little elbow grease for harder, whiter, attractive and SAFE floors. No. 59

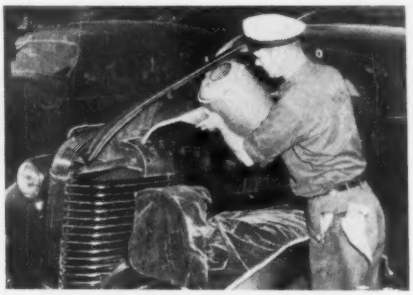
Safe Hand Cleaning but Fast is what Magnus Hand Cleaner offers you. No harsh chemicals. No gritty, scratchy scouring agents. As fast as any cleaner on the market, it leaves hands smooth, without robbing the skin of its natural oils. No. 60

A Magnus 755 Success Story

A short time ago a service station bought its first drum of Magnus 755. Almost the first job they had to tackle was a 1925 Dodge sedan that coasted in with no oil pressure and plenty of bad knocking. The owner worked on Long Island, but lived in New Jersey, near the service station. It was six o'clock at night and he had to have the car the next day, though he was sure that the bearings were burned out.

The garage man said that though there was nothing to do but face the facts IF the bearings were gone, he might be able to fix up the car if the trouble was due to sludge. The owner was willing to take this chance, of course. They followed standard Magnus desludging procedure, without touching a bolt or nut. When the engine was flushed out, after desludging with #755, fresh oil added, and the engine restarted, the owner was disconsolately saying, "No oil pressure," when he had to change his tune. The gauge showed normal pressure and in less than five minutes that Dodge was on its way, with nary a trace of a knock and a mighty relieved man at the wheel.

Number one—engine desludging. With the Magnus 755 method, you don't have to dismantle. Just drain the oil, replace with 755 and idle the engine for an hour (outdoors). Remove the cleaner, flush and replace with fresh lube oil. You'll get a thoroughly desludged engine, safe for your customer and safe for your reputation. An investment of $160 in Magnus 755, lube oil, flushing oil and labor will enable you to clean 44 engines at $12 or more each, a return on the investment of 230%.



Next—sell a pint of Magnus Metaffin with every oil change, as insurance for your customer against building up of sludge deposits. There's a neat profit for you on every can at no labor cost—and plenty of chances to sell. And don't overlook Magnus Carfoam—the quick, thorough, customer-pleasing method of car washing that insures a nice profit to you because it cuts the labor required for a good wash job down to a mighty low point.

The fourth is curb service radiator cleaning with Magnus D-Scale-R, the acid cleaner that can't attack anything but the rust and scale in the cooling system. It will turn in a very agreeable profit per job, besides preventing those "come-backs" you are bound to experience with ordinary radiator cleaners.

Start cashing in on these four Magnus "Profit Makers" from now on.

Magnus Chemical Company, 174 South Ave., Garwood, N. J. In Canada – Magnus Chemicals, Ltd., 4040 Rue Masson, Montreal 36, Que. Service representatives in principal cities.

IN THE AUTOMOTIVE FIELD IT'S
Magnus
CLEANERS • EQUIPMENT • METHODS

New Products

(*Continued from page* 190)

159

Baldor Electric Co. is featuring its Handifast Battery Charger. According to the manufacturer this fully portable unit charges a battery at a

full 80 ampere rate. It also makes a discharge test of the battery and desulphates it. Complete with selenium rectifier stack, heavy-duty hand grip clips and 15-ft. A. C. cord, this unit weighs 46 lb.

(For further information see coupon on p. 53)

160

Stewart-Warner Corp. has introduced the Triple Pump Hoist Alemiter which raises three air-operated pumps (one chassis and two gear) to clear tops of 100 lb. drums by opening an air controlled valve when the lubricant drums become empty. A newly designed system of changing the drums helps to keep grease off the floor, and clothing. A one piece cover keeps the lubricant free from dirt.

(For further information see coupon on p. 53)

161

Wayne Pump Co. has introduced a new series of small air compressors. Single stage units with ⅓, ½ and ¾ horsepower, their capacities range from 1.5 to 3.5 CFM. These units replace an earlier series and incorporate an eccentric drive of the type used in household refrigeration units. Mounted on a vertical tank, each compressor comes complete with check valve, safety valve, pressure control switch, tank drain and all controls necessary for completely automatic operation.

(For further information see coupon on p. 53)

162

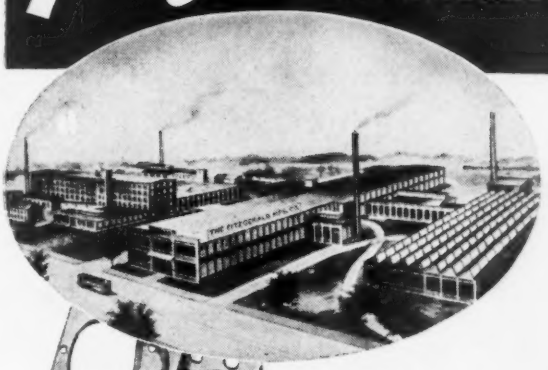
Gatke Corp. is featuring its Custom-bilt Grooved Brake Lining. According to the manufacturer these grooves which are cut diagonally in the face of the brake lining assists in attaining uniform brake contact, keep surfaces clean, induces air cooling and restores the efficiency of wet brakes. Gatke also produces a line of Brake Blocks for heavy duty commercial vehicle use.

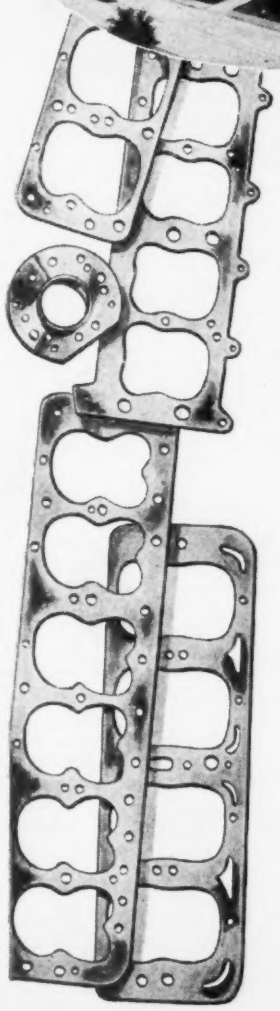
(For further information see coupon on p. 53)

(*Continued on page* 192)

Fitzgerald

THE BIG NAME IN GASKETS





For 42 years, Fitzgerald has been building gaskets of highest quality — gaskets that insure tight, leakproof joints and help maintain motor performance at high efficiency.

Today, Fitzgerald gaskets meet every demand of high speed, high compression motors. They are especially designed for modern heavy duty service — for continuous running hour after hour, day after day.

The complete Fitzgerald line includes gaskets and grease retainers to meet your every need. Ask your jobbers for full details.

The Fitzgerald Manufacturing Company, Torrington, Conn.—Branches, Chicago and Los Angeles — Canadian FITZGERALD, Limited, Toronto.

FITZGERALD

SINCE 1906 **GASKETS**

THE COMPLETE LINE THAT COMPLETELY SATISFIES

THE SPIKES DIG IN FOR BETTER TRACTION

Campbell Lug-Reinforced Tire Chains give better traction and longer life!

Like the spikes on the mountain climber's shoes, the exclusive, patented* saw-tooth lugs of Campbell *Lug-Reinforced* Chains dig right into ice and snow for the grip that means quick starts and safe stops—they put an end to dangerous slip and skid. The tough, long-wearing steel and one-piece construction mean increased mileage. For your profit—and your customers' safety—feature Campbell *Lug-Reinforced* Tire Chains. *International Chain & Mfg. Company, York, Pennsylvania.*

*U. S. Pat. No. 2,093,547—Canadian Pat. No. 223,568

CAMPBELL

Lug-Reinforced

TIRE CHAINS

THE CHAIN WITH THE SAW-TOOTH GRIP

The CAMPBELL Line

163

Ideal Industries, Inc. have introduced a new, all-purpose, industrial tank type cleaner for general vacuum cleaning, dust collecting and water pick-up. This unit is completely self-contained and has no external bag. In operation, incoming air is whirled around inside the tank and heavy particles are deposited there. The air then passes through a cloth bag filter where the dust is removed. Collected dirt is emptied from the cleaner by raising the vacuum sealed lid and lifting out the 9 gallon tank and dust bag. It is powered by a 1 1/3 hp. continuous duty motor.

(For further information see coupon on p. 53)

164

Milwaukee Dustless Brush Co. have announced a new Round Speed Wash fountain brush designed especially for washing small trucks and passenger cars. Water is constantly fed through the handle from a standard size hose and pressure is equalized by eight jets in the brush block. Back and handle are of light weight steel. In addition to the new Round Speed Wash Brush, this company is continuing to offer the oblong model which is now being used for large trucks, trailers, buses and trains.

(For further information see coupon on p. 53)

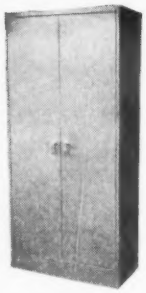
The Hope Line for Every Storage Need

HOPE ALL METAL PARTS BINS

Hope all metal bins afford quick, orderly parts department expansion. They are specially designed for automobile parts departments according to the requirements of various auto manufacturers. Patented slip-in shelf dividers snap into position in 3 seconds—no bolts, clamps or screws. The special features of Hope Bins reduces parts handling time.

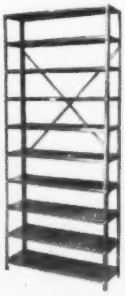
HOPE ALL METAL STORAGE CABINETS

Ideal for safe, dust-proof storage. Reduces petty thievery. Convenient for storage of costly small parts and office supplies. Holes punched on 2" centers for flexible shelf set-up. Available as storage cabinet, wardrobe cabinet or combination of both. Attractive chrome door handles equipped with tamper-proof, grooved key lock. Size: 78" high, 36" wide, 18" or 24" deep.



HOPE ALL METAL COMMERCIAL SHELVING

Designed for efficient handling of package or carton storage, and storage of large, cumbersome parts. Easily adaptable for display purposes. Useful for dead storage. Furnished with cross braces for extra rigidity. Can be furnished with closed vertical uprights for sides. Standard size: 36"x 12"x 84". Other sizes available.



WRITE FOR COMPLETE INFORMATION
•
Early Deliveries

Hope Metal Products Company
1507 Rockwell Avenue
Cleveland 14, Ohio

165

Standard Motor Products, Inc. have altered the packaging of their Blue Streak and Standard lines so as to obtain greater distinction of appearance and quicker identification. Blue Streak boxes are now printed in blue, black and white, while Standard boxes are done in orange, black, and white. Packages containing heavy units are reinforced with metal edges. A large clear white section of the front flap of each box carries the code number, printed in black type.

(For further information see coupon on p. 53)

166

Ahlberg Bearing Co. is now handling the Jack & Heintz line of precision ball bearings. These bearings thus become part of an integrated bearing distribution package, the Ahlberg seven point plan. This plan offers the Ahlberg ball bearing service that includes bearings of all types and for all bearing application, including Bower roller bearings, CJB Ahlberg ball bearings, Automotive Special thrust bearings and now Jack & Heintz bearings.

(For further information see coupon on p. 53)

167

Arco Company is producing three new aids for the refinishing of cars and trucks. These are a motorized "Color Bar," the larger manually-operated "Color Machine" and the six-purpose infra-red drying lamp. The "Color Bar" uses automatic rotoplane agitation for the mixing of lacquers and synthetic enamels to match more than 4000 different standard automobile colors. The drying lamp, which was developed by Arco some years ago, has been redesigned with a special spot-light switch for use independent of the five other sealed beam infra-red bulbs.

(For further information see coupon on p. 53)

(Continued on page 194)

IT'S THE ROTARY IMPACT THAT DOES IT

NO KICK
NO TWIST
EVEN ON THE TOUGHEST JOBS

AMAZING
all-purpose
ELECTRIC TOOL
will

- Drill up to 1/4" dia.
- Ream up to 1/2" dia.
- Tap up to 1/2" dia.
- Run Nuts up to 3/8" dia.
- Drive Screws up to 3/8" dia.
- Hole Saw up to 1 1/2" dia.
- Bore Wood up to 29/32" dia.
- Drive Studs up to 3/8" dia.
- Drill Masonry up to 3/8" dia.
- Extract Broken Studs up to 3/8" dia.
- Wire Brush up to 3/8" dia. shanks.

(Uses Standard Attachments)

AMAZING! No Kick—No Twist—Even if you stall the spindle completely, the motor continues to run.

AMAZING! It's Reversible—full power in either direction—runs on 110V ac-dc.

AMAZING! It saves up to 90% of the time on nut-running operations alone.

AMAZING! With Standard Attachments you need only ONE INGERSOLL-RAND IMPACT TOOL to do all operations.

Ingersoll-Rand

11 BROADWAY, NEW YORK 4, N. Y. 144-18

168

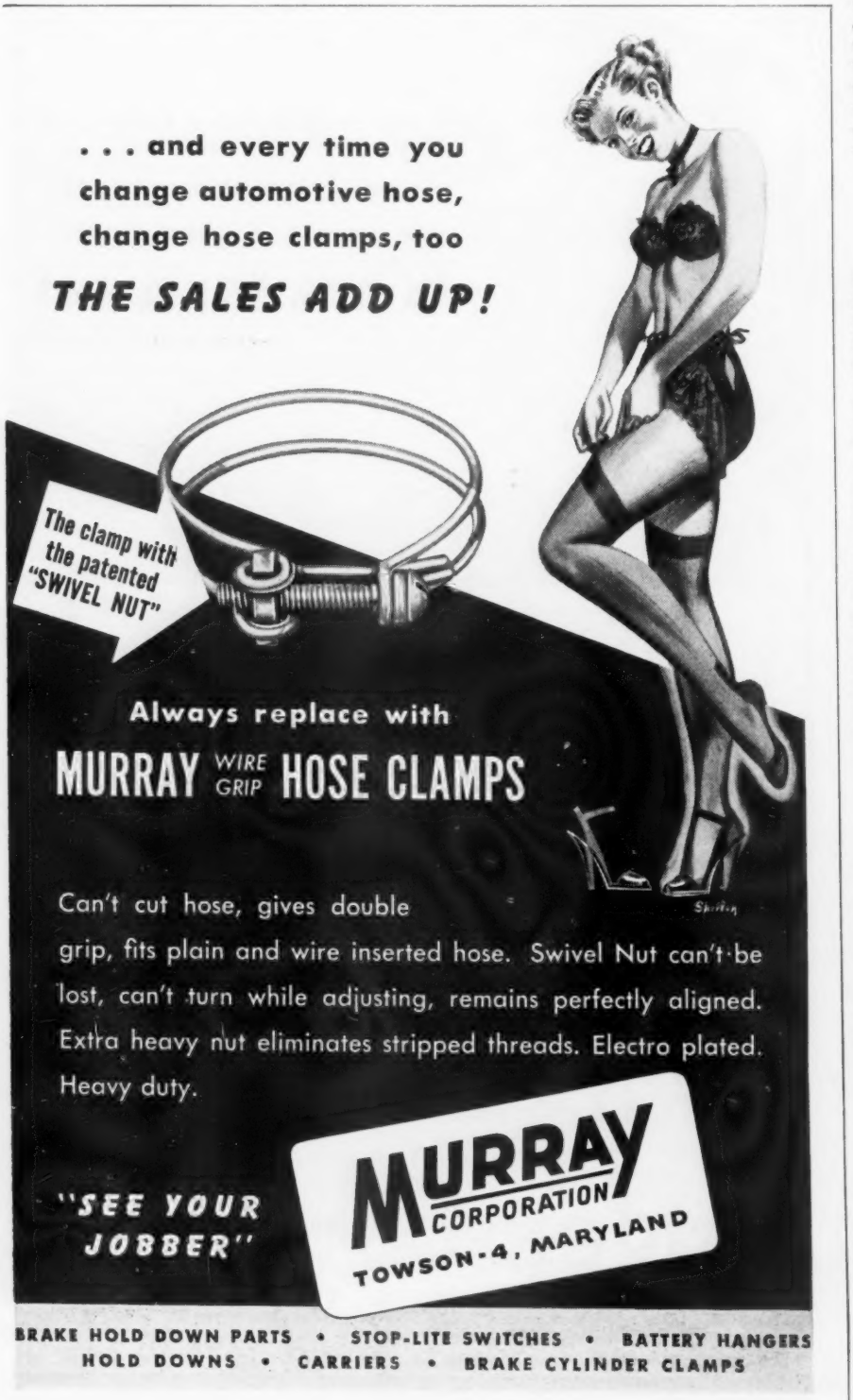
Fox Products Company's new Multi-Purpose 6-12 charger handles both 6 volt automotive batteries and 12 volt batteries used on trucks and buses. Designed for both fast and slow charging, the 6-12 Multi-Purpose slow charge circuit includes a full range of adjustment of slow charge. The fast charge rate is regulated by an electric time switch powered by a synchronous motor. A fully automatic circuit breaker shuts off the charger in case of serious overload or reverse terminal connections and a five blade 8 inches pressure type fan cools the units.

(For further information see coupon on p. 53)

169

Harley C. Loney Co. is featuring its line of Truck Wheel and Passenger Car Wheel Balance Weights. They have completed their commercial vehicle balancing program and now have a Weight to fit every commercial on-the-road vehicle. In their passenger car line they are featuring the Pioneer, which is to be used on conventional wheels and will also fit under the wide trim rings, and the Adventurer which was primarily developed for fitting on the 1947 deluxe Cadillac wheel assembly.

(For further information see coupon on p. 53)



170

Sunnen Products Co. is providing in one kit a complete set of tools to remove and re-assemble all valve assemblies from Ford and Mercury 85, 95 and 100 horsepower motors. This set was specifically designed to handle late model Fords with new type close-coiled valve springs. It also handles all models since 1932. A three foot bar lifts from the bottom of the valve stem, making it unnecessary to lift with the bar inserted through the springs. The set includes a hardened forged steel valve guide driver for driving down tight carbon-filled valve guides. It also includes a lifter bar, protector plate, valve guide driver, spring compressor and 9 valve props. Sunnen has also introduced two new series of mandrels for automotive use. They are designed to be used with Sunnen Wet Honing machines and Bushing Grinders and cannot be used dry.

(For further information see coupon on p. 53)

171

Arrow Safety Device Company has developed a flashing Stop Light of Sealed Beam construction. It has a red lens, a high and low beam and a metal strip across the lens face with the letters STOP cut out. The lights front and back alternating between high and low beam flash a signal. Arrow is also marketing a Directional Signal Switch which clamps to the steering post and eliminates the relay in the switch assembly.

(For further information see coupon on p. 53)

172

Cords Piston Ring Manufacturing Co. are now featuring their Engineered Piston Ring Set. These sealed packages contain the new, scientifically designed, Thermo-Form Cords Piston Ring, featuring the Concave Steel Segment. These units are now available for all motor vehicles.

(For further information see coupon on p. 53)

(Continued on page 196)

YOU CAN STAKE YOUR • REPUTATION ON PERFECTION!

NO CHATTER...NO GRAB when you replace with PERFECTION CLUTCH PLATES

Perfection Clutch Plates are scientifically designed to assure a softer, more positive pedal action, and to eliminate chatter and grab. Hubs are full floating, and won't pull out. Coil springs eliminate torsional vibration. Spring steel cushioning segments are arched and riveted so as to aid cushioning.

In every way, these clutch plates uphold the Perfection tradition for long-wearing, accurately made replacement parts. For over 28 years Perfection has been building business volume for repairmen whose parts and service are of the highest quality.

See your Perfection jobber, or write us for complete details.

PERFECTION GEAR COMPANY, HARVEY, ILL.

THE MARK OF PERFECTION CERTIFIED PARTS PERFECTION GEAR CO. HARVEY, ILL.

PERFECTION PRODUCTS INCLUDE: Silent Timing Gears • Metal Timing Gears • Silent Timing Chains • Transmission Gears and Parts • Differential Ring Gears and Pinions • Differential Cases and Parts • Fly Wheel Gears • Cylinder Heads • Clutch Cover Assembly Parts • Clutch Plates • Pressure Plates • Clutch Forks and Parts • Clutch Rebuilders.

173

Clawson & Bals, Inc., manufacturers of "Ring-True" engine bearings and connecting rods, have enlarged the "Ring-True" line to include water pumps and kits, shackles, shock links, valve springs and whip ends. The water pumps, either ball bearing or bushing type, are available as complete units or in the form of repair parts kits for all popular makes of vehicles. Whip ends, available in lengths from 12 in. to 30 in., are equipped with couplings at each end to accommodate proper adapters for use with any standard make of grease gun apparatus. Clawson & Bals shackles are made to manufacturers' specifications in two types: rubber for Fords, Chevrolets and Plymouths; steel for Chevrolets.

(For further information see coupon on p. 53)

174

Perfection Gear Co. is continuing to feature its "Pre-Fitted" Automotive Parts. The products in the Perfection line include Silent Timing Gears, Metal Timing Gears, Silent Timing Chains, Transmission Gears and Parts, Differential Ring Gears and Pinions, Differential Cases and Parts, Flywheel Gears, Cylinder Heads, Clutch Cover Assembly Parts, Clutch Plates, Pressure Plates, Clutch Forks and Parts and Clutch Rebuilders.

(For further information see coupon on p. 53)

175

Bostrom Manufacturing Co. is featuring the Model 47 Truck Seat. Designed to replace standard seats without lay-up of the truck, this seat has

rubber cushions and replaceable, snap-on covers. Adjustment to the individual driver is obtained by pulling out (without tools) one or more of the six main springs. It is adjustable for leg length and has no metal-wearing parts. All moving parts except the shock absorber piston rod move in rubber. This hydraulic suspension seat can be installed in all but a very few of the trucks now on the road or in production.

(For further information see coupon on p. 53)

176

E. Edelmann & Co. have introduced a new method of packaging their Brass Fittings. These fittings are now packaged in small plastic transparent bags and in transparent plastic trays. The plastic bag holds 5 fittings while the plastic trays are 3 in. high and 2¼ in. wide and 11½ in. deep. The one-piece trays hold an identification card in a special enclosed slot and the slanted trays move on molded plastic runners.

(For further information see coupon on p 53)

177

Anchor Post Products, Inc. are now manufacturing a new type gasoline burning heater, designed especially for truck cargo space heating. This Cargo Heater is of the vapor entraining type and functions entirely independent of motor or vehicle operation. It delivers 15,000 BTU's and is completely self-contained, including fuel pump. It is available for operation on 6, 12 and 24 volt systems with thermostat control.

(For further information see coupon on p. 53)

(Continued on page 198)

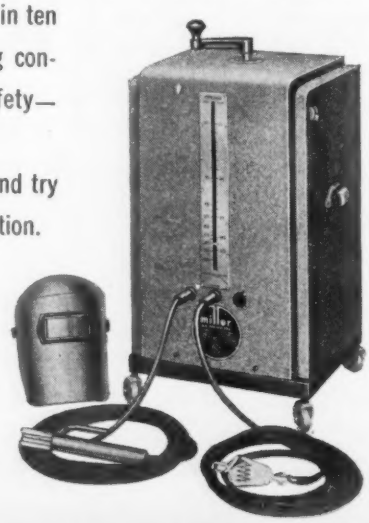
Do welding costs have you up a tree?

● Replace that obsolete welding equipment with Miller A.C. Welders. Nothing to wear out—no rotating parts—installation and operation costs on Miller A.C. Welders are less than that of D.C. equipment of equal capacity.

Miller A.C. Welders are available in ten Models and Sizes, all emphasizing continuous current—arc stability—safety—speed—and efficiency.

Stop at your distributor's store and try the Miller, or write for full information.

"Sold only through recognized distributors."



A.C. ARC miller WELDERS

miller ELECTRIC MANUFACTURING CO.
APPLETON, WISCONSIN

You'll sell 'em . . . if you tell 'em

WOLF'S HEAD

is Three Steps Ahead

EXPERTLY CONTROLLED DEWAXING
Keeps Wolf's Head free-flowing even in cold weather

DOUBLE DISTILLING
makes Wolf's Head richer, tougher, more heat resistant

TRIPLE FILTERING
removes all free carbon and other troublesome impurities

Tell your customers that Wolf's Head is a superior oil because it is refined three steps further than ordinary motor oils. And tell them, too, that Wolf's Head . . . 100% pure Pennsylvania, premium grade . . . is refined from only the finest Pennsylvania crude. Wolf's Head Oil Refining Company, Oil City, Pa., New York 10, N. Y.

100% Pure Pennsylvania —"Premium Grade"

P.G.C.O.A. Permit No. 6

178

Andrews Manufacturing Co., manufacturers of a complete line of Automotive Cable and Electrical Products has just released a new section, No. 45S to their present catalog featuring items in the Andrews line.

(For further information use coupon on p. 53)

179

Fram Corporation's latest addition to their line is a Crankcase Air Filter designed to replace conventional Oil Filler Breather Caps. Incorporating chemically treated Fram-Tex Filtering Media this filter can be installed or the cartridge changed while the car is being gassed. Three sizes of cartridges and three adaptors service most cars, trucks and tractors. Fram is also featuring a new Gasoline Filter in which the cartridge can be changed without tools and the servicing can be done while the car is being gassed.

(For further information see coupon on p. 53)

180

Auto Compressor Co. has introduced an Air Compressor of new design. The two cylinders are replaceable and cast flange type inter and after coolers replacing tubing, pipe fittings and other potential sources of leaks. The intake and exhaust valve assemblies are of new design and full floating wrist pins are fitted. Two stage compressors are offered in six models ranging from -½ to 10 hp. The assembly includes centrifugal pressure release, V belt drive, air strainer and silencer, and automatic start and stop control.

(For further information see coupon on p. 53)

181

Miller Manufacturing Co. is producing the Miller Insulated 20 in. x 20 in. x 18 in. Commercial Oven for Curing Bonded Brake Linings. Oven is usually operated at 380 degrees for thirty minutes to cure bond on eight passenger car brake linings when held in Miller brake shoe clamping fixtures. Sixteen brake shoe assemblies can be cured in about 45 minutes in this oven. The oven is equipped with nichrome heating elements, automatic thermostat, timer, Weston Thermometer and full opening side door.

(For further information see coupon on p. 53)

182

Van Bergen & Greener are marketing a complete line of front wheel coil action pivet pin kits, including 28 numbers to fit all popular cars. The upper and lower outer knuckle support pin and bushing sets with fittings included, are now available for immediate delivery. The inner lower pin sets will be ready soon. The kits are boxed with labels listing applications for car, year and model. A catalog sheet listing all numbers will be sent free on request.

(For further information see coupon on p. 53)

183

Burd Piston Ring Co. is continuing production of its Piston Ring and Car Heater line. The Burd Heaters, trade named HaDees, include the conventional hot water model H-544 with over-size core, and the underseat model FR-64 which requires but 3½ in. underseat clearance. Fans for truck and passenger car use are also included in the Burd line.

(For further information see coupon on p. 53)

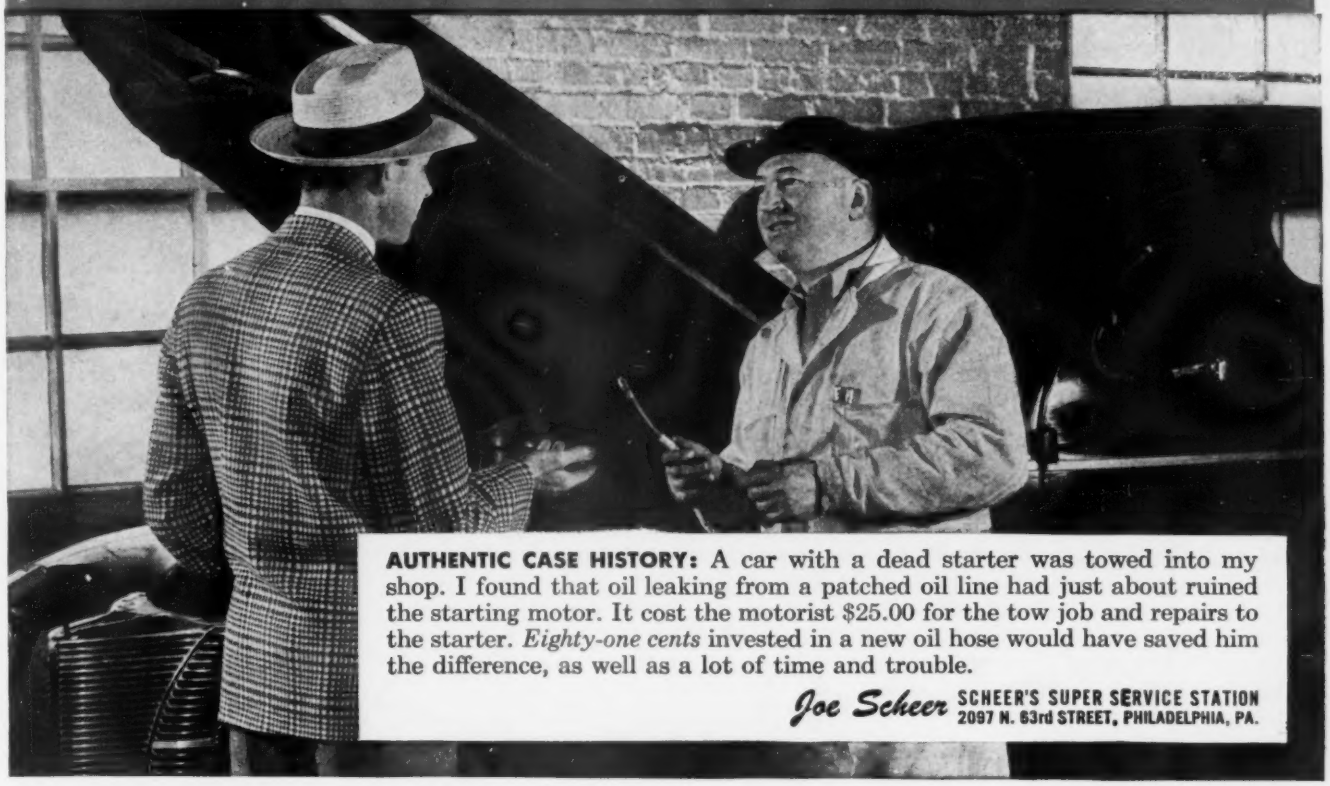
184

Sealed Power Corp. is featuring its new Expander Ring for Sealed Power MD-50 steel oil ring. Among the advantages claimed for this unit are increased direct ventilation for greater oil economy, more independent action for steel segments, free and unobstructed circulation of oil through all clots in cast-iron spacer and oil holes or vents in the piston. The spring is designed to prevent compensation for greater variation groove depth.

(For further information see coupon on p. 53)

(Continued on page 200)

Replacing an 81¢ oil line would have saved you $25.00 and a lot of trouble!



AUTHENTIC CASE HISTORY: A car with a dead starter was towed into my shop. I found that oil leaking from a patched oil line had just about ruined the starting motor. It cost the motorist $25.00 for the tow job and repairs to the starter. *Eighty-one cents* invested in a new oil hose would have saved him the difference, as well as a lot of time and trouble.

Joe Scheer SCHEER'S SUPER SERVICE STATION
2097 N. 63rd STREET, PHILADELPHIA, PA.

We pay $50.00 for case histories! Tell us about *your* experience with faulty gas-oil hose. We will pay $50.00 for each one used by us in a Resistoflex advertisement. The company will be the sole judge; and all entries become the property of Resistoflex Corporation.

GAS AND OIL LINES CAUSE LOTS OF TROUBLE

but

RESISTOFLEX

gas-oil hose with COMPAR tube

WILL NOT SWELL, ROT, CLOG, LEAK, BREAK, OR COLLAPSE!

- Totally unaffected by all types of gasoline, gasoline additives, Diesel fuel.
- Totally unaffected by all lubricating oils and crankcase additives.
- Totally unaffected by flexing and vibration.
- Original equipment on vehicles, vessels, aircraft, oil filters.

Resistoflex Corporation
Belleville 9, New Jersey

Trade-Mark Reg. in U. S. & Can. Pat. Off.

PLANTS: Belleville, N. J.; Elkhart, Ind.; Toronto, Can.

GAS • OIL HOSE • HOSE ASSEMBLIES • REUSABLE COUPLINGS • TUBE FITTINGS

PREVENT "TOOL ABSENTEEISM"

WITH HALLOWELL

MOVABLE TOOL STANDS OF STEEL

Fig. 1855

. . . built of sturdy steel, welded throughout and equipped with free-rolling casters, they enable you to keep your tools with you as you move from job to job. The steel drawers, as shown, can be locked to prevent "tool absenteeism". Available with two drawers as illustrated above . . . with one drawer . . . or without drawers, depending on your needs. Write now for your copy of the "Hallowell" Catalog.

AND ANOTHER "HE-MAN"

THE HALLOWELL WORK-BENCH OF STEEL

Fig. 732
Pat'd. Pats. Pend.
Drawer is extra

● This sturdy, ready-made "Hallowell" Work-Bench of Steel is the ideal addition to shop or factory. "Hallowell" Benches may have steel tops; smooth, high-grade laminated wood tops; or steel tops covered with Masonite Tempered Presdwood . . . representing several hundred standardized combinations. They are made in a number of standard heights, widths and lengths; which stand firm without costly bolting to the floor—and can be moved and rearranged easily and may be joined end to end to form a continuous work-bench of any desired length.

Ask for your copy of the "Hallowell" Catalog.

"Hallowell" Shop Equipment is sold entirely through Industrial Distributors.

OVER 45 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

JENKINTOWN, PA. BOX 561

BRANCHES: Boston, Chicago, Detroit, Indianapolis, St. Louis, San Francisco

New Products

(*Continued from page* 198)

185

Electric Auto-Lite Co. is featuring its new Resistor Spark Plug. According to the manufacturer the new Resistor in this Plug will make possible highly improved operation and economy. A complete line of Auto-Lite Resistor Spark Plugs will soon be available for original equipment and for replacements on popular makes of cars, trucks and tractors.

Auto-Lite has made available a newly designed spark plug cleaner to distributors of Auto-Lite plugs. This single valve operation cleaner is dust tight and has a built-in dust and abrasive separator which tends to prevent clogging. It is equipped with a pressure gauge and has a built-in water trap.

(For further information see coupon on p. 53)

186

Packard Electric Division of the General Motors Corporation is featuring its new "96" Merchandiser Display Group. This blue and yellow metal display stand measures 24 inches wide by 12 inches deep by 52 inches high carries a complete line of Packard cables. It can also serve as a small work bench in an electrical department.

(For further information see coupon on p. 53)

187

Chief Alinement Corp. is now in production of its new Model 10 Alinement Unit. Requiring 7 ft. x 18 in. floor space, with ramps detached, this unit can be operated by one man. It incorporates a frame straightener, axle press, frame gages, tire marker, toe-in gage, caster camber king pin gage, turning radius plates, wheel tracking gage and jacks and portopower. Floating adjustable beams between the runways allow application of pressure to frame at any location and do not protrude outside of runways.

(For further information see coupon on p. 53)

188

Buell Manufacturing Co.'s Air Horn come complete with a 6 x 12 in. air tank, control valve, control handle tubing, fitting, compressor and mounting kit for any installation. A feature of this horn tank unit is a tire valve on the tank which permits use of an air hose for tire inflation on the road.

(For further information see coupon on p. 53)

189

Fulton Company continues to feature the Fulton Sun Shield. This unit is custom styled to blend with the lines of the car and is supplied in neutral green, dull matte finish, specially treated to provide suitable paint adhesion for the final finish to match the car.

(For further information see coupon on p. 53)

(*Continued on page* 202)

ALLEN

Gives you the best in Tune up Equipment

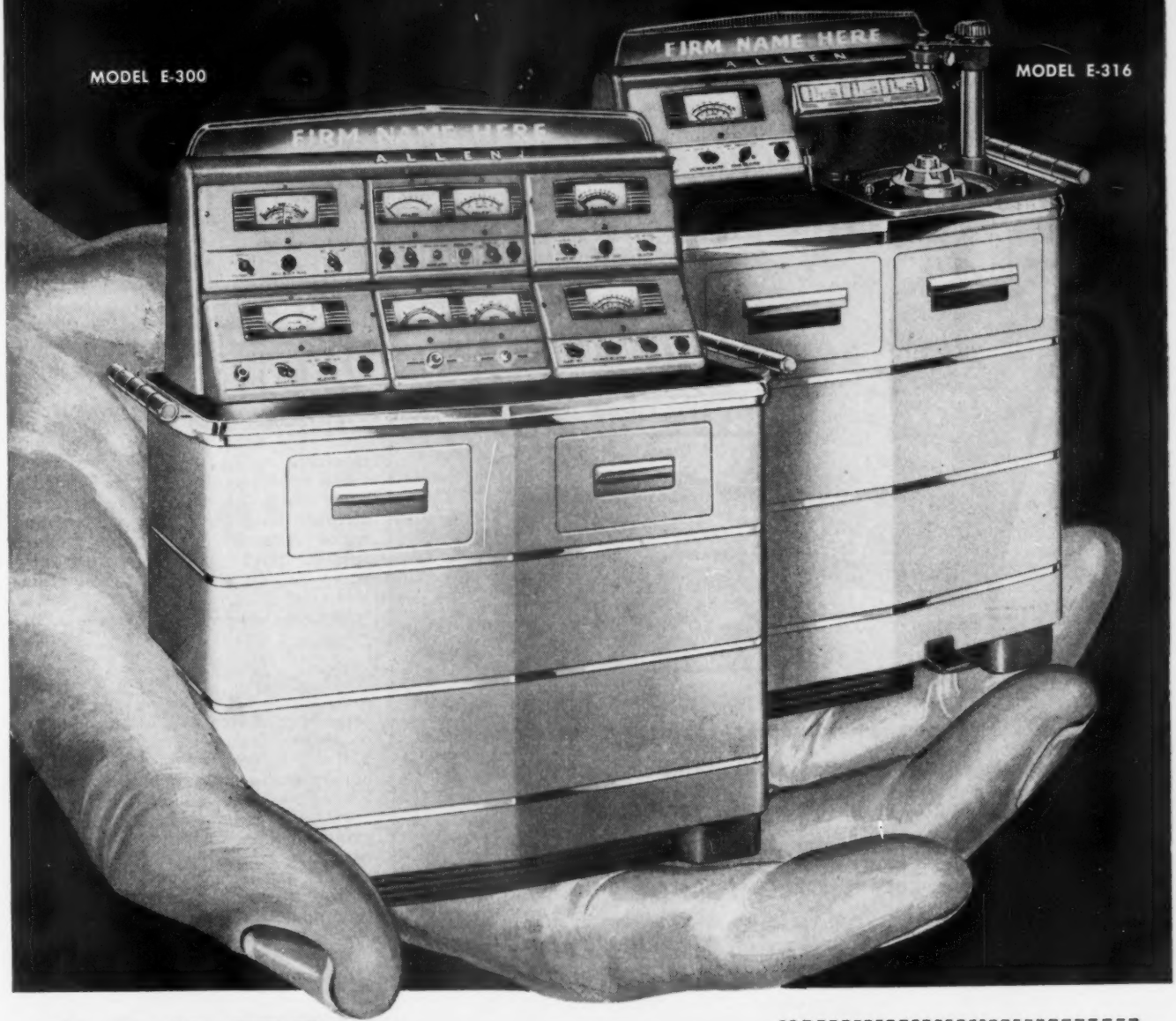
Allen, the best known name in tune-up equipment, leads again with the new Allen Motor Analyzer and the new Allen Syncrograph. Beautiful new styling with gleaming sand and cream finish with rich chrome trim. Easier than ever to use with simplified connections, large dials, color coded leads. And with every Motor Analyzer and Syncrograph you get personal instruction by an Allen Factory Trained Representative. Get out in front of your competition. Get Allen.

ALLEN COURSE AGAIN AVAILABLE

The Allen Course, "Modern Engine Tune-up," which trained thousands of civilian and army mechanics in modern engine tune-up procedure is again available. Ask your jobber for details.

MODEL E-300

MODEL E-316



ALLEN ELECTRIC and EQUIPMENT COMPANY

2327 NORTH PITCHER STREET • KALAMAZOO, MICHIGAN

Motor Testers · Syncrographs · Fast Chargers · Welding Equipment · Electrical Laboratories

ALLEN Electric and Equipment Company
2327 North Pitcher Street
Kalamazoo, Michigan

Please send me complete information on the Model E-300 and the Model E-316.

Name_____

Address_____

City_____ State_____

190

Felt Products Manufacturing Co. is distributing new, 180-page, quick-reference Master Gasket Catalog. Designed for the jobber counterman as well as the dealer, this catalog features innovations in listing arrangement, and special provisions for inserting new catalog sheets as required. A complete line of Automotive Gaskets, Gasket Sets, Oil Seals and other sealing materials is listed.

(For further information see coupon on p. 53)

191

H. B. Egan Manufacturing Co. makers of Camel brand products are now manufacturing a heavy duty tube for passenger cars and trucks, made of Butyl rubber and the Camel Jiffy Universal Clamp.

(For further information see coupon on p. 53)

192

Carlton Lamp Corp. has announced a new rectifier bulb, Model C-49. This replacement item can be used in most charging equipment that employs a rectifier lamp. The bulb is filled with argon and has a tungsten-thorium alloy filament. The use of heat resistant glass lessons breakage and the lamp is guaranteed by the maker for a minimum of 1200 hr. use.

(For further information see coupon on p. 53)

193

Bishman Manufacturing Co. have added a new vulcanizer and truck tire remover and tube tester to their line. The heavy-duty tube vulcanizer handles tubes of all sizes. It has a swiveling shoe that can be adjusted to any position while the tube lies in a normal flat position on the rubber pad. The truck tire remover requires no hydraulic or air power pressure and operates by a steel shoe which presses the tire down from the rim when the handle is turned.

(For further information see coupon on p. 53)

194

Adams Grease Gun Corp. has introduced the Adams Electric Grease Gun, Model ERC-1000. With a grease capacity of 40 lb. it delivers 9 oz. of fibrous lubricant per minute and is powered by the special ⅝-hp. universal motor. It develops 5500 lb. pressure. It operates on either A. C. or D. C. current and is fully portable. There are double grease check valves in the base and an electric heating element to make pumping of heavy lubricants possible in cold weather.

(For further information see coupon on p. 53)

195

Aircraft Screw Products Co. is introducing a new line of taps and inserting tools at reduced prices. Featured in the line are the Heli-Coil Inserts which are designed to restore a stripped hole to its original size and make replacement of broken studs a simple, quick operation. They also equip any tapped hole with a stainless steel liner.

(For further information see coupon on p. 53)

196

Bradford Machine Tool Co. is producing a line of "Metal Master" bench and pedestal type grinders and buffer-polishers equipped with full one horsepower, single phase motors. Eleven tool models make up the "190" Series. These include a combination grinder and buffer on pedestal mounts, a double wheel pedestal grinder and a series of seven buffers, each available in a bench or pedestal type model.

(For further information see coupon on p. 53)

197

Bussmann Manufacturing Co. is featuring its line of SFE fuses. These make up a complete line of glass tube fuses such as are used for the protection of automobiles, radios and instruments. To help the dealer or service station, Buss Glass Tube fuses are now put up five in a metal box.

(Continued on page 204)

JUST ONE GOOD Cooling System SEAL DOES ALL SEALING JOBS

SERCO is a permanent repair for leaky radiators, cracked heads, and cracked blocks! This one great seal, famous for years, is all you need for cooling system leaks. Serco mixes perfectly with all glycol and alcohol base anti-freeze. Easy to use. Fully guaranteed.

WHY USE TWO... WHEN ONE WILL DO?

SERCO PRODUCTS

Service Supply Co.

1115 SEVENTH ST. • DENVER 4, COLO.

Use the Ignition Cable that Outlasts and Outperforms

Re-Wire With

PACKARD FOUR-FORTY

IGNITION CABLE SETS AND SPOOLS

THE CABLE THAT'S BETTER 7 WAYS

1) Better HEAT Resistance
2) Better COLD Resistance
3) Better OIL Resistance
4) Better MOISTURE Resistance
5) Better ABRASION Resistance
6) Better CORONA Resistance
7) Better AGE Resistance

You can do a better re-wiring job, win lasting customer satisfaction, by using Packard Four-Forty, for this cable is different. Its special-compound protective sheath won't puncture, rupture, crack, rot or fray like ordinary cotton-braid-and-lacquer coverings. Packard Four-Forty *seals in* the high voltage surge to the spark plugs—gives customers the advantage of *balanced characteristics* for longer cable life, more dependable ignition performance. Order Packard Four-Forty from your distributor today—in spools or sets.

Packard
REG. U.S. PAT. OFF.
TRADE MARK

Packard Electric Division, General Motors Corporation
Warren, Ohio

FOREMOST BUILDER OF AUTOMOTIVE AND AVIATION WIRING

This box has a slide cover that can't accidentally open and is printed in three colors.

(For further information see coupon on p. 53)

198

Chicago Metal Hose Corp. is offering a new flexible metal tube suitable for such automotive applications as heater tubing, ventilating ducting, carburetor air intake and exhaust. Known as Rex-Tube Type RT-6, it is available in sizes ½ in. to 8 in. inside diameter. Construction is the fully interlocked type. It is available in galvanized steel, brass or aluminum.

(For further information see coupon on p. 53)

199

Guaranteed Parts Co. is now marketing a line of ignition Tune-Up Kits plus Blueprint Tune-Up Specifications for all popular makes of cars and trucks. All the essential parts are provided in one package while the Blueprint Specifications which are included outline full instructions for doing the job. Catalog sheets are available and the company has developed a full merchandising and advertising program in support of these Kits.

(For further information see coupon on p. 53)

200

Champion has introduced a new spark plug gap setting tool which incorporates a heavy ground electrode bending fixture and eight retractable wire feeler gages. The bending fixture has four slots milled to fit all sizes of regular spark plug ground electrodes. Eight music wire feeler gages ranging in size from 15 to 40 mils provide accurate gaging of the following spark plug gap clearances: .015, .025, .030, .037, .020, .028, .032, .040 in.

(For further information see coupon on p. 53)

201

Gulf Oil Corp. has introduced a new oil for automotive Diesel engines and for gas engines operating in extra heavy-duty service which combines the advantages of paraffin base and full detergency. This product, named Gulflube H. D. Motor Oil, is described by the manufacturer as particularly suitable for its field of service. It incorporates a patented anti-foam agent, which prevents crankcase foaming under severest temperatures and speeds.

(For further information see coupon on p. 53)

202

Van Dorn Electric Tool Co. is continuing to feature its complete line of Bench Grinders, Die Grinders, Drills, Hammers, Polishers, Portable Grinders, Porto-Shears, Quick-Saws, Sanders, Screw Drivers, Tappers, etc. An electric valve shop suitable for complete valve reconditioning is also available from Van Dorn.

(For further information see coupon on p. 53)

203

Neptune Meter Co. has announced a new, low model gasoline dispensing pump 5 ft. in height. This pump, known as the Neptune Red Seal L-1, features accessibility of all internal units for easy installation and servicing, especially recessed locks on front and rear panels, exterior light switch, extra-large pump and meter strainers and visiguage and dual air separator.

(For further information see coupon on p. 53)

204

H. D. Campbell Co. have announced a new electric, thermostatically controlled, motor heater to maintain engines at starting temperature while parked inside or outside in cold weather. The unit plugs into any 110-120 A. C. light socket and can be left plugged in all night. It is equipped with pilot light and adjustable thermostat and 6 ft. of cord.

(For further information see coupon on p. 53)

(Continued on page 206)

Step Up Your Shop

SERVICE • CAPACITY • PROFITS

A FEW OF

44 JOBS

YOU CAN DO

WITH AN ATLAS

Bearings and Bushings
Valve grinding
Thread rechasing
Armature work
Electrical service
Repair parts
Checking generators
Trueing and boring
Special shop tools
Coil winding
Piston refinishing

WITH AN

Atlas 10" LATHE

You're equipped to handle 44 important servicing jobs in your own shop . . . in as little as one-tenth the time . . . and collect *all* the profits . . . when you have an Atlas lathe.

You can give speedier, more complete service. Costs go down on scores of jobs — as time and work are saved by this versatile, low-cost tool. A good mechanic can quickly master its operation.

Ask your jobber for full details on this proven profit-maker. Send for detailed bulletin on the great new Atlas Quick-Change lathe.

ATLAS PRESS CO.

188 NORTH PITCHER STREET
KALAMAZOO 13, MICHIGAN

SEND TODAY FOR THE NEW FREE QUICK-CHANGE BULLETIN

SAND IT!

Metalmaster "KOOL GRIP" DISC SANDER

7" Heavy Duty. Air intake through baffled handle cools grip; assures adequate supply of clean air to motor. All ball bearings with permanent lubrication. Slide safety switch. 110 or 220 volt AC-DC motor.

DRILL IT!

Metalmaster ½" Drill

New Model 48—light, compact, powerful. Drills ½" in steel; 1" in hardwood. Net weight 9 lbs. All ball bearings with permanent lubrication. Chrome-moly steel helical gears. Jacobs chuck. 110 volts AC-DC. Other Metalmaster Drills from ¼" to 1" Heavy Duty.

GRIND IT!

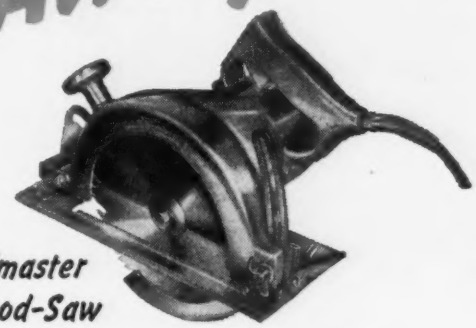
Metalmaster Bench Grinders

3 Models: ⅓ to ½ HP. All ball bearings in dust proof housings. Adjustable guards and tool rests. Extra wide guard models for buffing.

Admiral Heavy Duty Grinder

Model G—Two ball bearing. Wheel guards adjustable radially. Hinged doors on guards. Chrome-nickel steel spindle. Motor totally enclosed to N.E.M.A. specs. 220-440, 550 volts, 50 or 60 cycle, 2 or 3 phase. 1-5 hp.

SAW IT!



Metalmaster 8" Wood-Saw

Balanced streamlined design gives greatest accuracy with least effort. Vertical cut: Maximum 2-29/32"; minimum 1". Maximum cut at 45°, 1¾". All ball bearings with permanent lubrication. Helical gears. One-piece aluminum housing. Polished steel shoe plate. 110 volts AC-DC. Net weight 17 lbs. 8 oz.

Metalmaster 6" Wood-Saw cuts to maximum depth of 2". Net weight 10 lbs. 8 oz.

with BRADFORD PRECISION TOOLS!

Precision Since 1840

Modern design, precision workmanship and highest quality materials set the standards for all Bradford Tools. Each Bradford Tool model is the result of skillful, superior design by a group of the industry's foremost electric tool engineers. Each is designed and built to help industry speed production and lower costs.

Those shops that demand long service, low cost and efficient operation from their tool investment are *Bradford equipped*. Ask your Bradford distributor for a demonstration, or for full information on Bradford Tools designed to your work requirements. Write for your copy of the complete Bradford Tool catalog.

THE BRADFORD MACHINE TOOL COMPANY

663 Evans Street, Cincinnati, Ohio

205

Doan Manufacturing Co. has introduced a new Display Merchandiser that displays a selection of Doan Floor Mats, Accelerator Pedals and Brake and Clutch Pedal Pads. The complete unit includes the Merchandiser 12 Armor-Flex Floor Mats, 19 pair Pedal Pads, and 11 Accelerator Pedals.

(For further information see coupon on p. 53)

206

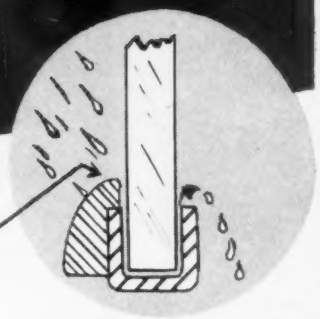
Pyroil Co. is now offering to its dealers the Pyroil No. 5 Merchandising Deal. This offer includes thirty 3 oz. Pyroil A for gasoline tank flat-top, sealed containers, eighteen 12oz. Pyroil B, for crankcase-containers and a display sign in red and black that measures 3 feet high and 18 inches wide and has four shelves.

(For further information see coupon on p. 53)

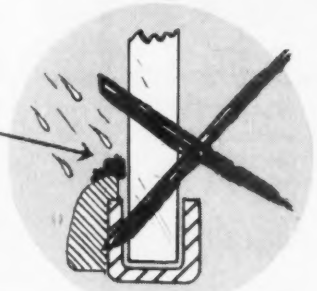
for all window leaks

SEALZIT

LIQUID GLASS SEALER



CAR WINDOWS LEAK WHEN RUBBER DRAWS AWAY FROM GLASS. Service station records show that 40% of car windows leak. This probably checks with your own experiences with "leaker" headaches. That means 4 out of every 10 cars now in operation, old and new, are prospective customers for SEALZIT, the NEW liquid glass-sealer.



PAST METHODS OF ATTEMPTING TO SEAL by applying overlay are out, with SEALZIT, the effective liquid glass-sealer.

SEALZIT STOPS LEAKS INSIDE, AT THE SOURCE. SEALZIT, a colorless, non-inflammable, liquid glass-seal stops window leaks economically. Easy to apply with eye dropper or brush, SEALZIT seeks out and seals leaks . . . dries quickly . . . remains pliable, not brittle. SEALZIT gives lasting results as it clings to both glass and molding . . . never peels off or breaks away. SEALZIT IS TESTED AND APPROVED BY LEADING AUTOMOBILE MANUFACTURERS.

Available for immediate delivery from your automotive supplies jobber, or write for source near you.

Windshield

SEALZIT

Seeks out and seals out water leakage

A product of Foster & Kester Co., Inc., Hardt Bldg., Broad and Columbia, Phila. 22, Pa., Mfrs. of wonderful new "Lustre Sealzit"

207

General Automotive Specialty Co. are producing a new station type heavy duty illuminated heater switch. These switches which are of the four position type, have 1½ ohm resistance, more than ample for starting large heater motors under lowest temperatures. The contact arm slides along a series of brass contacts, instead of resistance coil to obtain variable speeds. The Resistance Unit is held in place to back of ceramic base by three clips and is removable.

(For further information see coupon on p. 53)

208

Charles Rein & Company is manufacturing the Rein Roll Holder, a unit designed to permit holding of hydraulic brake pressure in any desired amount by means of a special valve actuated by an electric solenoid switch. Operated from a switch mounted on the steering post this unit not only provides positive holding of the vehicle on up, down or level grades without foot pressure.

(For further information see coupon on p. 53)

209

Federal-Mogul Corp. has introduced a line of new connecting rod bolts and nuts which are available in all steel, 2-drawer cabinet that has 16 compartments. Each compartment is identified by a card, lacquered to resist grease or dirt. The assortment enclosed in the cabinet services 95% of all popular makes and models.

(For further information see coupon on p. 53)

210

Foster Manufacturing Co. is offering a Hammer Head Plier, an all-purpose tool, which in addition to its use as a regular plier may be used as a tin and wire cutter. The hammer tip located on the lower jaw, allows the user to drive tacks or nails without changing tools and the tip of one handle is ground as a screwdriver.

(For further information see coupon on p. 53)

211

Coats Iron Tireman has announced a new tire tool claimed to mount or dismount tires in 30 sec. Eliminating tire irons, mallets and other tools this Iron Tireman rolls tires on or off the rims in one operation. It requires 3 ft. operating radius and stands 36 in. high. It handles all tires in all plies from 15 in. to 21 in.

(For further information see coupon on p. 53)

212

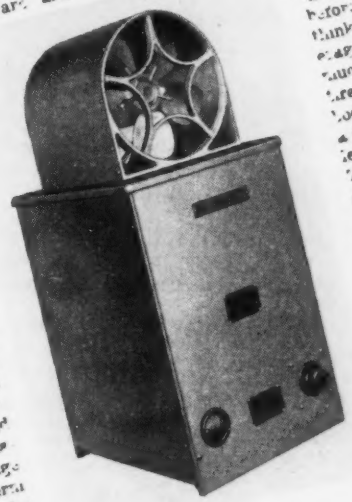
Asbestos Manufacturing Co. is offering a new line of friction materials for passenger car and heavy-duty service, safety-rated to meet the requirements of each specific vehicular brake job. Fan belts, hose and car mats are also included in the new product program.

Featured in the line are new DeLuxe Brake Lining Sets for passenger cars and light trucks. These combination friction sets packed in three-color cartons are made by the Dry Process Method.

(For further information see coupon on p. 53)

EXTRA Garage News Daily

MECHANICS GIVE BOSS A RAISE!



That's news that IS news.

But it's not as strange as it seems. You'll get a raise from your mechanics, too—a real raise in profits—when you install Air Clear in your shop. There'll be no more headaches from exhaust gases, your men will feel better, work more efficiently and they won't be all dragged out at the end of the day.

You'll feel better, too, as profits go up and gripes go down—and you'll be glad to know that Air Clear has made your shop a better place to work in.

Write for full information.

GENERAL OZONE CORPORATION

17 West Sixtieth Street, New York 23, N. Y.

New York • Chicago • Denver

GARAGE

Air Clear

Destroys Exhaust Gases Electrically

IMPORTANT: Approved by Underwriters' Laboratories, Inc.

Manufacturers of ozone generating equipment for garages • cold-storage warehouses • refrigerated cars • walk-in coolers • air recirculating systems • homes • hospitals

Statistics Show Shift In 10 Top Markets

Latest statistics showing distribution of automobiles and trucks in the export market reveal that a shift in distribution has taken place since 1939, which is considered the last normal pre-war year. According to figures for the first 7 months of this year the top ten foreign markets in order of numerical importance for U. S. cars are: Canada, Union of South Africa, Argentina, Brazil, Mexico, Belgium, Sweden, India, Netherland and Venezuela. In 1939 the ten leading countries in order of volume were: Union of South Africa, Canada, Australia, Argentina, Sweden, Belgium, Brazil, Mexico, Colombia and British India. It is interesting to note that whereas the Netherlands and Venezuela are currently in the top ten countries, they did not appear in the category in 1939 and that Colombia and Australia were in the top ten in 1939 and currently are no longer in that group. Trucks also show a shift in distribution. The 1947 figures show that the top ten U. S. truck importers in order are: Argentina, Brazil, Mexico, Venezuela, Canada, Belgium, Union of South Africa, India, Cuba and Colombia. In 1939 the order was: India, Belgium, Hongkong, Union of South Africa, Brazil, Sweden, Argentina, Venezuela, China and Spain. Not only has the order shifted in those countries which are still in the top ten bracket of American truck buyers, but four countries are out of top ten and have been replaced by others since 1939. Countries which appear in the 1947 top ten that did not appear in that bracket in 1939 are: Mexico, Canada, Cuba and Colombia. Countries which have fallen below that category since 1939 are Hongkong, Sweden, China and Spain. The shift in relative position in the top ten between 1939 and this year is also interesting. India went from 1st to 8th; Belgium from 2nd to 6th; Union of South Africa from 4th to 7th; Brazil from 5th to 2nd; Argentina from 7th to 1st; Venezuela from 8th to 4th. Thus it is obvious that Western hemisphere markets have gained in importance.

Truck Builders Look at High Compression Engines

Although most discussions about the high compression engine has been centered around the passenger automobile, two major truck builders are said to be very much interested in the engine for early adoption. One consideration is that fleet operators with their bulk buying opportunities probably would have a better chance to get the higher octane fuel before it is generally available to the public in quantity. It also is reported that further tests with the high compression engine indicate that first performance figures given were, if anything, on the conservative side. At the time details of the engine were released in June an increase of about 30 to 35 per cent the efficiency of the conventional engine was cited.

The Modern Car Demands Modern Service!

THOSE old timers in their "gas buggies" would be amazed at the sleek, powerful models now on the road. There was little thought of car-servicing in those days but the picture is far different today.

The modern car is a complex mechanism constantly requiring many forms of highly specialized service. Among these, automotive chemicals play a vital part.

In any type of chemical service it is important to use only products of proven quality. For positive results and assured customer satisfaction standardize on Warco—the line of scientific formulas and rigid laboratory control.

WARCO MO-TUN-UP — This marvel of chemistry helps to avoid costly valve jobs and makes it unnecessary to remove cylinder heads. Cures sticky valves by eliminating gummy formations. Cleans hard carbon between rings and cylinder walls. In standard sizes.

WARCO K. O. KARB—Insures longer motor life and gives motor more power by removing gummy formations from valves. A dependable carbon preventive. In 8 oz. cans only.

WARCO RADIATOR FLUSH — Routs rust particles and scale. Restores clean circulation. Adds to comfort of driver by giving him an air-cooled engine. Liquid form, in quarts only.

OTHER WARCO PROFIT BUILDERS
GRADE "A" HYDRAULIC BRAKE FLUID
GRADE "A" HEAVY DUTY HYDRAULIC BRAKE FLUID
RADIATOR SOLDER ENGINE WELD
SHOCK ABSORBER FLUID NO. 200
KNEE ACTION AND SHOCK OIL NO. 100
JACK OIL PENETRANT
WINDSHIELD CLEANER GASKET CEMENT
REPLACEMENT UNIVERSAL JOINT BOOTS

Demand Warco Products from your jobber. Beware of substitutes.

WARWICK LABORATORIES CO.
334-42 Cleveland Street, Brooklyn, N. Y.

The De Luxe CHEMICAL LINE

WARCO

INLITE Reduces Operating Cost... Helps You Build Business!

RED BALL VAN LINES, Jamaica, New York, praises Inlite's all-around quality performance

Yes, satisfied customers mean *more business* and *more profits* for you. And thousands of motorists, including large fleet owners, are praising the dependable, economical performance of original equipment quality Inlite Brake Lining.

The Red Ball Van Lines, Jamaica, New York, is one example. The owner of this highly-regarded, efficient long distance moving concern writes that "I am pleased to recommend Inlite for smooth, noiseless, dependable brake service under severest operating conditions. I am always trying to cut operating cost, and that is why I use Inlite."

Why is Inlite so popular? Because it installs easily and quickly, saving time and effort. It comes into normal operation immediately, eliminating readjustments. And every Inlite segment has the same uniformity of structure, resulting in long-lasting brake service. Take full advantage of this Inlite popularity. Use it exclusively. You'll find Inlite superiority helps you by pleasing more customers, and bringing in quicker, easier sales and profits. Order Inlite today from your jobber.

A General Motors Product

UNITED SERVICE MOTORS

A UNITED MOTORS LINE

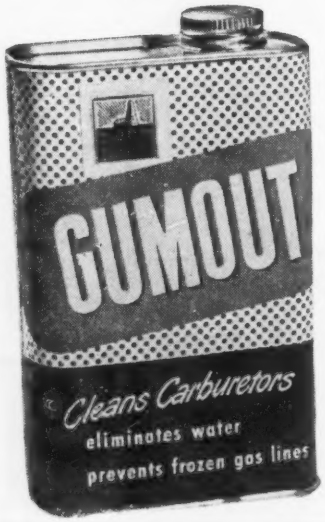
Available Everywhere Through United Motor Service Distributors

INLAND MANUFACTURING DIVISION, *General Motors Corporation,* **DAYTON, OHIO**

★INLITE★
BRAKE LININGS

Step up sales for big year-round profits with Penn Drake

GUMOUT



- Cleans carburetors
- Prevents gas-line freezing
- Eliminates water
- Reduces carbon formation
- Makes starting easier
- Maintains peak motor efficiency

Cash in on today's best seller—Penn Drake Gumout. Guaranteed by a pioneer petroleum refiner, Gumout spells big, sure profits for you . . . fast turnover . . . customer satisfaction and definite repeat sales.

GUMOUT IS composed of 100% active ingredients . . . powerful solvents not diluted in any way. One pint in ten gallons of gasoline, once a month or every 1000 miles, dissolves all gum and foreign deposits, keeps carburetors and fuel systems sparkling clean . . . helps operate cars efficiently, economically.

GUMOUT ALSO FREEZE-PROOFS the entire fuel system. It absorbs water present in gas tanks and fuel lines.

TREMENDOUS MARKET! Every car, tractor, truck, bus, boat, plane . . . every gas-powered engine is a ready-made sales opportunity for Gumout. Gumout is now used in large volume by leading bus, taxi and truck operators everywhere.

JOBBER INQUIRIES INVITED
WRITE TODAY

PENNSYLVANIA REFINING CO.
2687 Lisbon Road, Cleveland 4, Ohio
Butler, Pa. • Edgewater, N. J.

Lynn Products Joins MEMA Names Jackson Sales Head

Lynn Products Co., 317 E. Ontario Street, Chicago 11, Ill., has been admitted to membership in the Motor & Equipment Manufacturers Association. Lynn Products Co. are manufacturers and distributors of automotive supplies, hardware items and sporting goods. They exhibited some of their products at the recent A.S.I. show in Chicago.

Fred W. P. Jackson was recently appointed sales manager of the company. He is a member of Automotive Booster Club No. 8, and formerly covered the Mid-West territory for Lynn Products.

Suggestion Award Plan Pays Off at Pontiac

The war-born Suggestion Award Plan under which employes are paid for production, safety and other manufacturing suggestions at Pontiac Motor Division is working well under peacetime conditions, according to Harry J. Klingler, general manager.

Employe suggestions are being received at a rate of 50 per week, Mr. Klingler said, and since April, 1942, when the Plan was begun Pontiac has paid out approximately $100,000 in government savings bonds. Of the 8500 suggestions made to date, approximately 25 percent have warranted use after extensive checking.

Federal Survey Indicates Rise in Car Demand

Reports of a survey issued recently by the Federal Reserve Board show that the backlog of demand for automobiles is growing, especially among high income groups. They show that whereas last January 12 per cent of all spending units intended to buy cars during 1947, this percentage had increased in July to 13 per cent even though many of the original 12 per cent had already bought.

SIEBRING PORTABLE STEAM CLEANER

CUTS Cleaning Time In Half! SPEEDS All Repair Work!

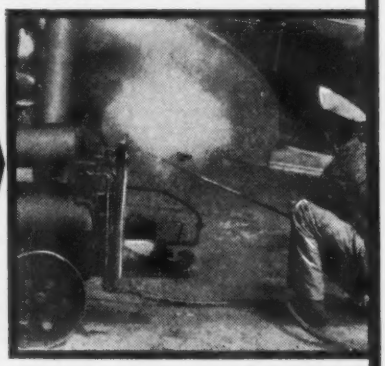
For Cars, Trucks and Tractors
- Motors, Parts and Springs
- Before Painting
- Steam Washing

Here's a time-saving, job-speeding, money-making piece of equipment every garage, service station or repair shop should have. It provides instant steam, hot-water, or both, UNDER PRESSURE with powerful, cutting chemicals. Knocks grease and grime from motors, machinery or parts in a hurry. Service-free! Simple to operate! Safe and economical! Try it in your plant AT OUR RISK. Write for literature and 10 Day "Free Trial" Offer!

Amazing LOW COST PORTABLE UNIT

★ OPERATES economically! Burns low-cost fuel oil or gas! Electric units also available! ★ NOT dependent on city water pressure or electricity. ★ PORTABLE — Easily moved about. ★ Conforms to "Boiler Code" Recommendations in all states.

IMMEDIATE DELIVERY



NEW SIMPLIFIED MODEL!
ONLY $150.00 F.O.B. GEORGE, IOWA

Write for Literature and Trial Offer!

SIEBRING MANUFACTURING CO.
503 MAIN STREET - GEORGE, IOWA

MAIL TODAY!

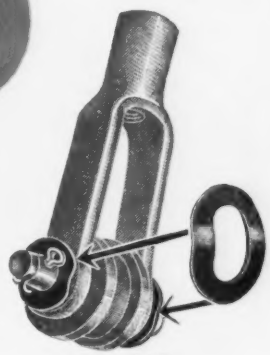
SIEBRING MFG. CO.
503 Main St., George, Iowa
SEND descriptive literature and 10 Day "Free Trial" Offer to
Firm Name _____
Address _____
City _____ State _____

MAIL THIS COUPON or WRITE for LITERATURE and TEN DAY TRIAL OFFER

New SERVICE SHORT CUTS

by CHAMP-ITEMS

Here are a few of the new service short cuts added to the more than 200 Champ-Items by popular demand. Time-Savers —Money-Makers.



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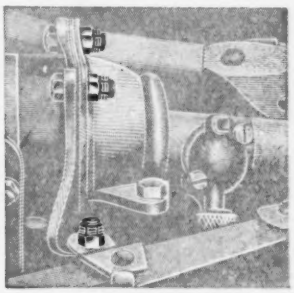
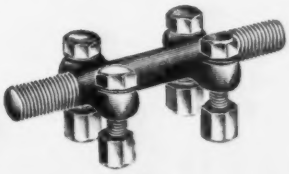
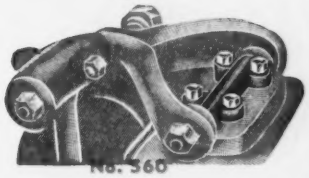


No. 566

No. 561





No. 560

No. 560—Inner Pivot Bar Bolt for front end suspension Dodge 1942-46; Chrysler 1941-46; Plymouth and DeSoto 1940-46.

No. 561—Gear Shift Lever Handle for Chevrolet 1940-47 made of aluminum to replace plastic handle.

No. 566—"Champlock" Lock Nuts in sizes of 1/4"—5/16"—3/8"—7/16" and 1/2". No lock washers or cotter pins required. All steel, one piece, not affected by heat or oil. Also assortment of 108 nuts for most shop needs.

No. 569—Anti-Rattler Spring Washer for all cars and trucks.

No. 923X—Sponge Rubber Weather Stripping — ideal for many insulating purposes.

No. 972—Universal Spring Center Bolts for all cars and trucks. No. 972A—5/16" x 10"; No. 972B—3/8" x 10"; No. 972C—5/16" x 5", and 3/8" x 5".

RE-CONDITIONING CHAMP-ITEMS INC. SHORT CUTS

See Your Jobber for Complete Details

CHAMP-ITEMS, INC.

6191 Maple Ave., St. Louis 14, Mo.

On every overhaul . . .

✓ *Check your radiator repairman*

✓✓ *He will double check the core!*

LAKE
CELLULAR RADIATOR CORES
(COOLING PART ONLY)

For PASSENGER CARS BUSSES • TRUCKS TRACTORS and INDUSTRIAL EQUIPMENT

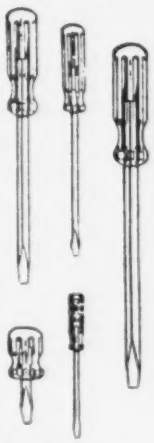
Don't let an overhaul job leave your shop before your radiator repairman has carefully checked the cooling system. Inadequate cooling can be the source of serious trouble. By consulting a radiator specialist, you can be sure the overhaul is complete. If core replacement is necessary, he will undoubtedly specify a Lake Core for the job. Every Lake Core is guaranteed.

If you have your own radiator repair department, send for our free Catalog No. 120, which lists all core specifications.

THE LAKE AUTO RADIATOR MFG. COMPANY
5005 Euclid Avenue Dept. 4-B Cleveland 3, Ohio
Telephone: HENderson 0513

SAFETY *has been added to* SERVICE *in the New* VACO *line*

UL — LISTED UNDER REEXAMINATION SERVICE OF UNDERWRITERS LABORATORIES INC.



• Men who know fine tools appreciate the perfect balance, superior performance and years of *extra* service built into every Vaco screw driver. Shock-proof, break-proof Amberyl handles and electrically heat-treated chrome vanadium bits assure long life and low overall cost.

Now *safety* has been added to durability. The new Vaco Amberyl handles are *slo-burning* . . . the only handles of their kind carrying the Underwriters' Laboratories, Inc. Reexamination Service Marker.

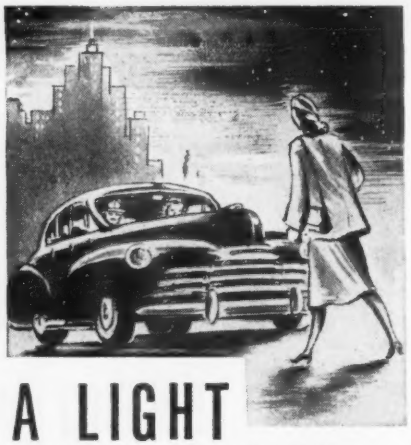
173 Types and Sizes

Investigate the Vaco line! Write to: Vaco Products Company, 317 E. Ontario St., Chicago, Illinois.

VACO PRODUCTS CO.

NEW . . . the Vaco Reversible!

Pull out the blade, turn it around, and the new Vaco *Reversible* becomes a Phillips instead of a regular screw driver. It's a real time saver on servicing jobs!



A LIGHT THAT FAILED

OFTEN CAUSED by FAULTY SWITCHES

BE SAFE! BE SURE!

Use COLE-HERSEE Guaranteed SWITCHES

MEMA MOTOR & EQUIPMENT MANUFACTURERS ASSOCIATION

COLE-HERSEE CO.
20 Old Colony Ave., Boston 27 Mass

K-F Announces $135,000 In Eight Contest Awards

A series of eight contests, with 1360 prizes totaling over $135,000 in value, has been announced by the Kaiser-Frazer Corporation.

The contests, claimed to be the largest ever sponsored by an automobile manufacturer, are part of Kaiser-Frazer's plans for expanded advertising and production for 1948. Entries for the first contest end on Dec. 28 and final entries for the last awards must be postmarked before Feb. 21, 1948.

Each contest will offer a total of 170 prizes worth over $17,000, with winners selected from the best 25-word entries—"New Kaiser and Frazer cars appeal to me because . . ."

There will be eight contest periods with identical prizes for each period. Entries received during the first seven contest periods will be eligible for prizes awarded in the period during which they are received.

Prizes which will be awarded for each of the eight separate contests include: Frazer sedan, 2 Kaiser sedans, $500 in cash, Radio Phonograph Combination, 15 Kaiser Cabinet Model Hydraulic Dishwashers, 50 sets of 4 Goodyear-whitewall tires and 100 Kaiser-Frazer Wool Plaid Lap Robes.

Dealers' Convention Alive To Car Service Problems

That car dealers are alive to the importance of parts sales and service is shown by an examination of their program for their annual convention late in January. First of all, the convention includes a large display of equipment. An innovation in itself. Furthermore, topics to be presented in the service symposium include, "Beating Competition with Quick Service," "Building Service Volume Through Lubrication Contracts," "Closer Customer Follow-up Will Increase Service Volume and Profits," "Better Parts Merchandising—a Must for 1948." With these increased efforts of the car dealers and the stepped-up activities of the independent operators, America's 40-million vehicles, in spite of their age, should be in tip-top shape.

... designed for You!

To help you do your work better, faster and safer, Plomb is continually developing new tools. During the past year alone, 124 high-quality tools, sets and containers were added, and a great many older tools were improved. To get the *best* as well as the *latest* tools, buy from your Plomb Dealer. Write for catalog to

PLOMB TOOL COMPANY
2226Q SANTA FE AVE.
LOS ANGELES 54
4772

PLOMB Streamlined TOOLS

NO. 90-09

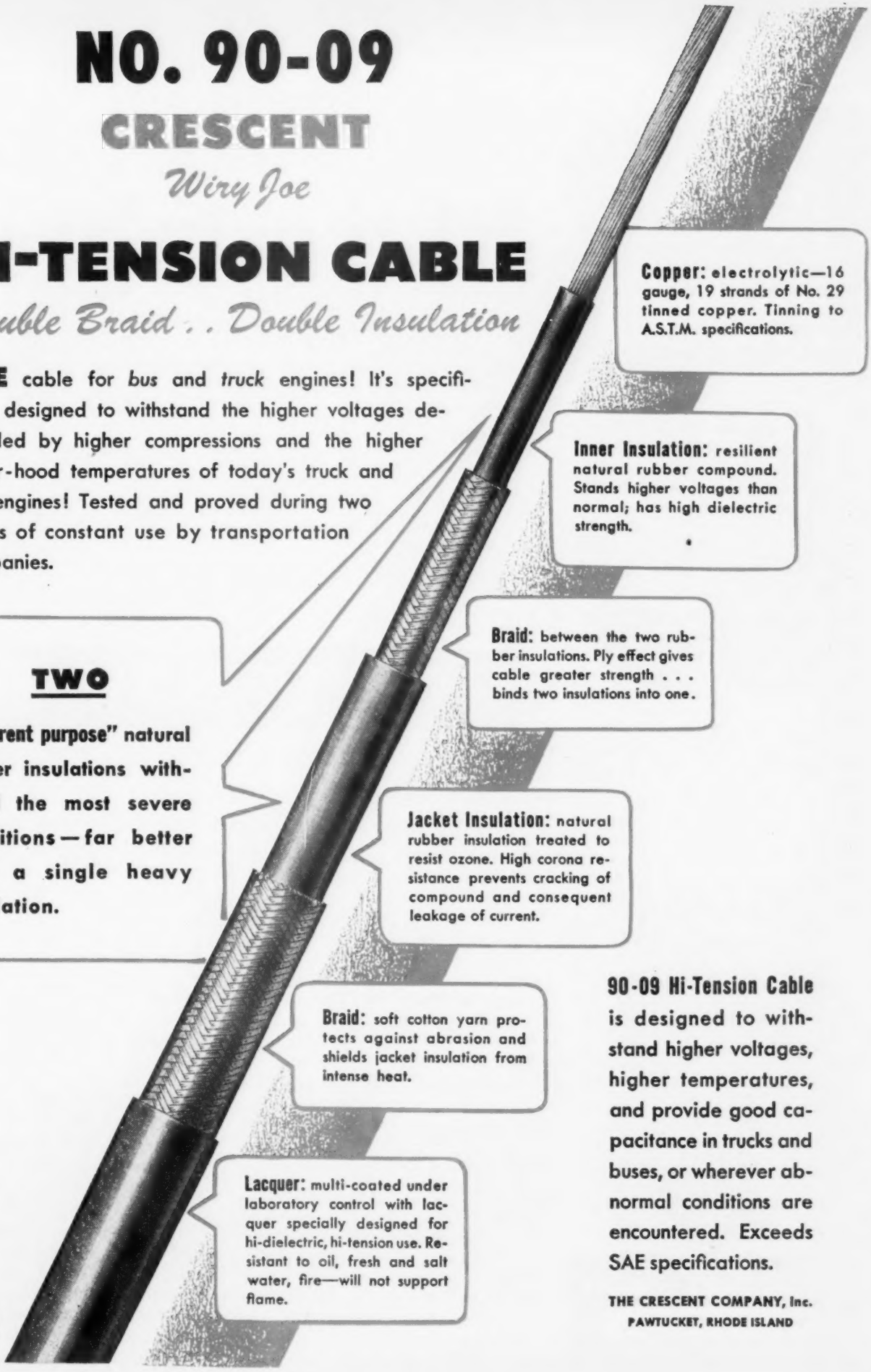
CRESCENT

Wiry Joe

HI-TENSION CABLE

Double Braid . . Double Insulation

THE cable for *bus* and *truck* engines! It's specifically designed to withstand the higher voltages demanded by higher compressions and the higher under-hood temperatures of today's truck and bus engines! Tested and proved during two years of constant use by transportation companies.



TWO

"different purpose" natural rubber insulations withstand the most severe conditions — far better than a single heavy insulation.

Copper: electrolytic—16 gauge, 19 strands of No. 29 tinned copper. Tinning to A.S.T.M. specifications.

Inner Insulation: resilient natural rubber compound. Stands higher voltages than normal; has high dielectric strength.

Braid: between the two rubber insulations. Ply effect gives cable greater strength . . . binds two insulations into one.

Jacket Insulation: natural rubber insulation treated to resist ozone. High corona resistance prevents cracking of compound and consequent leakage of current.

Braid: soft cotton yarn protects against abrasion and shields jacket insulation from intense heat.

Lacquer: multi-coated under laboratory control with lacquer specially designed for hi-dielectric, hi-tension use. Resistant to oil, fresh and salt water, fire—will not support flame.

90-09 Hi-Tension Cable is designed to withstand higher voltages, higher temperatures, and provide good capacitance in trucks and buses, or wherever abnormal conditions are encountered. Exceeds SAE specifications.

THE CRESCENT COMPANY, Inc.
PAWTUCKET, RHODE ISLAND

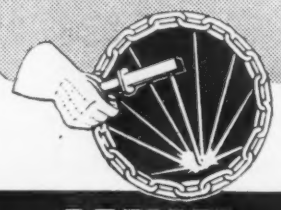
Aye...

PROFIT PROVED

MULTI-GRIP REGULAR

McKAY TIRE CHAINS

Sales come fast when you handle McKay Tire Chains. That's because McKays give your customers better protection, more mileage and greater economy. And "easier sales" mean extra volume and added profits for you.



THE McKAY COMPANY

462 McKAY BUILDING

PITTSBURGH 22, PA.

Contents:

COMPLETE RANGE OF SHIM STOCK IN SPECIAL DISPENSING CARTONS

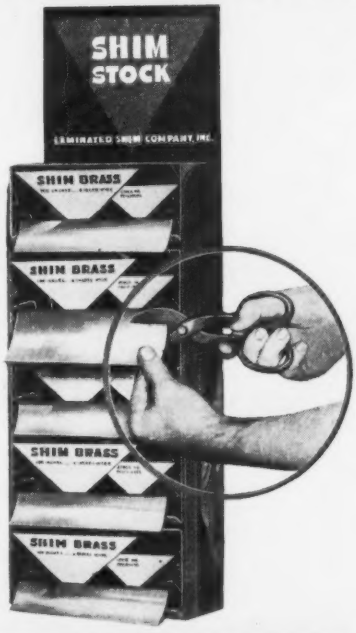
Precision shim stock, a much needed tool in the automotive repair shop, can now be obtained in specially designed dispensing packages that save you time and temper. Handy and convenient to handle and use.

Pull length desired through slot in carton and snip. Rest of the roll stays in carton (no rerolling) saving the shim material from wrinkling and waste. All packages plainly marked as to gauge.

99 KIT: Assortment of most used shim stock in a metal rack that is made to hang on the wall. 99 KIT contains precision gauges of brass or steel shim stock in 6 x 100 inch rolls: .001, .002, .003, .005 and .010 . . . and 2 x 9 inch strips of LAMINUM shim stock. Special assortments available to suit your needs. Metal rack can be restocked with standard cartons as required.

Consult automotive or industrial distributors.

3032

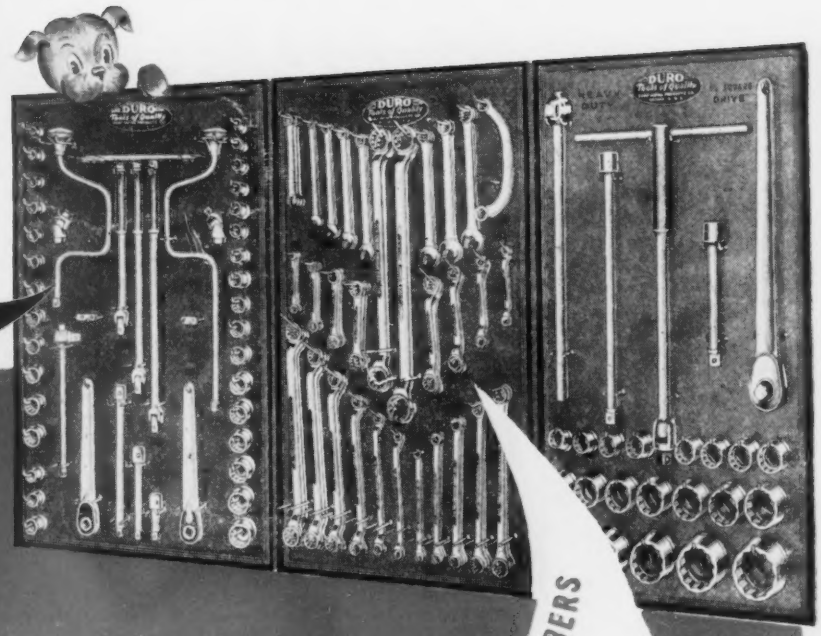


LAMINATED SHIM COMPANY
INCORPORATED
GLENBROOK, CONNECTICUT

Detroit Dealers Win Rough Battle with CIO

Detroit automobile dealers at year-end were uneasy victors in their battle with Local 415 of the UAW-CIO. The strike of mechanics, which had started in August, had been pretty well broken, with practically all men back on the job at the 77 dealerships involved. Ray Dooe, leader of the violence-ridden walkout, had resigned under pressure and was reflecting on his mistakes in the Detroit House of Correction where he was serving out a 45-day term for assaulting a union member. A few token picket lines still were up, but nothing of any consequence was happening. But everyone knew that the UAW was not going to give up without a struggle. It installed Joseph McCusker as administrator over the affairs of the local with orders to renew efforts for a new contract. Too much was at stake in dues and prestige to take defeat without at least one more try. Other organizing efforts in various parts of the country will hinge to some extent on how the Detroit local comes out, so the end is not yet. Competition in the form of the Independent Garage Workers Assn. has made some gains, particularly in one Chevrolet agency where it won 59 out of 66 votes. The union claims that it has affidavits from a large majority of the mechanics involved showing that they prefer Local 415 as their bargaining agent. However, dealers may insist that a bargaining election be held before they agree to negotiate. Whatever the outcome, it now seems certain that although there may be walkouts, the union has learned that goon squads and violence serve to defeat their own ends, and the prospects are for more peaceful settlements through negotiation.

LOOK HERE!



for those "doggone good tools"

.... DURO-CHROME

SEE THE DURO TOOL BOARDS AT YOUR JOBBERS

"TOUGH JOBS" become "SNAPS"

You'll never go wrong for the **right** tools when you select them from the Duro Tool Boards at your Jobbers. That's why millions of skilled mechanics all over the world standardize on Duro-Chrome Tools. They know that each tool they pick from the Duro Tool Board is designed for its particular job . . . all matched and balanced for perfect precision work.

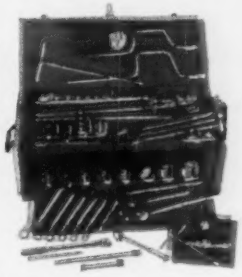
...WHEN YOU HAVE THE *RIGHT* TOOLS

You can feel the balance in a Duro-Chrome Tool when you pick it up . . . you can work with it like it was an extension of your own arm . . . you can do a job better, faster and with less strain. Make it a practice to watch the Duro Tool Boards at your jobbers . . . new tools are being added that will make your job easier and you are always sure of "top" quality when you make your selections from the Duro Boards. **DURO METAL PRODUCTS CO.,**

2649 North Kildare Ave., Chicago 39, Illinois.

THE 77-PIECE SENIOR DURO TOOL CHEST

Specially chosen to give the mechanic all the tools he needs for the finest work on ignition systems, generators, radios, general auto and airplane repair work including heavy-duty work on trucks, buses, tractors, farm and road machinery as well as for industrial uses. Your Jobber may have these chests in stock now . . . see him TODAY!



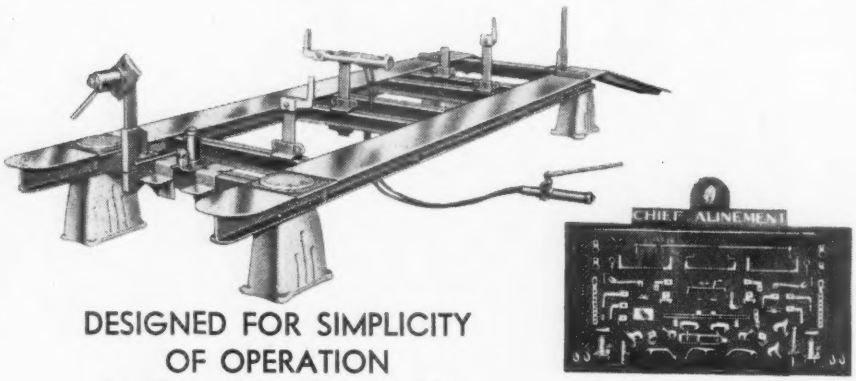
DURO TOOLS (HAND TOOL DIVISION)

The Mechanic's Best Friend

OVER A BILLION BUILT SINCE 1916

ALSO MAKERS OF DURO MACHINE TOOLS

CHIEF EQUIPMENT
TRIED • PROVED • ACCEPTED



DESIGNED FOR SIMPLICITY
OF OPERATION
SPEED AND ACCURACY

CHIEF Equipment is designed and built by pioneers in the frame and axle correction field—men with "know-how," experience and ability. Wherever CHIEF is used operators are enthusiastic about the ease of operation, simplicity of design, and the increase in their service department profits. CHIEF is compact and streamlined for minimum floor space; designed for one man operation; built from finest, toughest steel; straightens frames cold thru application of hydraulic pressure; and is fast and accurate. See your jobber or write to factory for complete details.

CHIEF ALIGNMENT COMPANY

ROCK ISLAND, ILLINOIS

The Most Profitable Year In Automotive History

The year 1947 can go down in history as the one in which everyone expected a depression and instead it recorded new highs in industrial production. From the standpoint of MOTOR AGE readers it was probably the most profitable in history. Dealers sold almost as many vehicles as they did in 1929 but at what is estimated as four times the profit. Certainly profits on used cars in 1929 were infinitesimal, whereas in 1947 the only limit was the dealer's conscience. Maintenance also hit an all-time high in dollar volume. The total including both parts and labor is approximately 11 billion dollars.

General business, car sales and maintenance should continue at high levels throughout the current year. There is every indication that the car buying public still wants more vehicles than the industry can turn out. Furthermore, with 94 per cent of the cars more than 5 years old, the maintenance market will undoubtly continue to yield high profits.

This
ANTI-FOG CLOTH
•
A *MUST* FOR
ALL CAR OWNERS!

A Natural for Fall and Winter Promotions

Dealers report record sales of the efficient Cadie "anti-fog" cloth . . . it's a big success. Assures clear vision in misty, foggy winter driving. Feature this best-seller, order now. There are two other popular Cadie polishing cloths . . . one for polishing auto bodies, one for polishing chromium and metal. All come in the colorful, salesmaking display unit shown.

ANTI-FOG GLASS CLOTH	AUTO BODY CLOTH	METAL CLOTH
W-25—29¢	A-25—29¢	MB-25—29¢
W-50—59¢	A-50—59¢	MB-50—59¢

CADIE CHEMICAL PRODUCTS INC.
621-6th AVE. NEW YORK 11 N.Y.

SENSATIONAL SHEROLITE
the WATERPROOF-POSITIVE IGNITION SEAL!
for

★ Protection against corrosion, rust, fungus!
★ Quick starting in any weather!
★ Better gas mileage!

It's the permanent ignition seal you've demanded for years! One easy-to-apply coating amazingly waterproofs *anything electrical*, leak-proofs by *sealing in* electrical energy, protecting ignition wires, spark plugs, coils, condensers, switches, etc. Just sherolite inside and outside of distributor and magneto caps, battery terminals and frame: One application LASTINGLY WATERPROOFS, PROTECTS from corrosion, fungus, rust, weather!

SHEROLITE — used and approved by General Motors, Packard, Chris-Craft, Autocar, White Motor Co., U. S. Armed Forces.

SHEROLITE PRODUCTS, INC.
P. O. BOX 111, CALDWELL, N. J.

FRENCHTOWN INSULATORS

ENGINEERED FOR SUPERIOR SPARK PLUG PERFORMANCE

Here at FRENCHTOWN plant, skilled ceramic engineers carry on a continuous program of research to maintain the high standards of insulator efficiency for better spark plug performance.

You'll find that FRENCHTOWN INSULATORS have unusually high heat resistance, and high dielectric and mechanical strength. Don't hesitate to write us. Our engineers will be glad to discuss your insulator requirements.

USED BY MORE SPARK PLUG MANUFACTURERS THAN ANY OTHER MAKE

FRENCHTOWN PORCELAIN CO.

Sales Office, 8 Muirhead Ave., Trenton, N. J. **Factory, Frenchtown, N. J.**

WITH

MASTER RECAMS

MASTER RECAMS are individually designed for all late model cars; easily installed without removing pistons. The profitable way to Stop Piston Slap, Oil Pumping and Motor Noise.

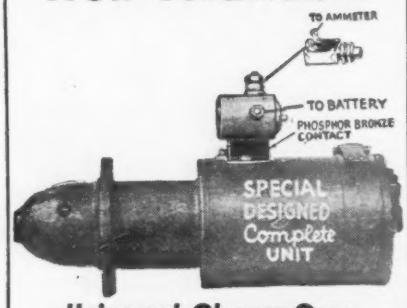
50¢ EACH

Regular Discounts to Jobbers and Dealers

WHERRY ENGINEERING COMPANY
3227-29 Morganford Rd., ST. LOUIS 16, MO.

SPINNING POWER

Now Available



Universal Change-Over SOLENOID STARTER UNIT

Designed and built for durable service and performance. Every Chevrolet and Plymouth owner needs this unit. Fits all cars with regular Bendix Starter.

MEMA

At All Good Jobbers

Mfd. & Dist. by

AUTOMOTIVE MAN'F'G. Co., Inc.
578 W. FULTON ST. CHICAGO 6, ILL.

R for truck and tractor cooling systems . . .

Warner

- **COOLING SYSTEM PROTECTOR**
- **LIQUID SOLDER** *(Non-Metallic, deposits tiny fibers to repair leaks)*
- **SERVICE CLEANER**

Warner-Patterson Co. 920 S. Michigan Ave. Chicago 5, Illinois

This Congress Expected To Cut Automotive Taxes

(*Continued from page* 70)

stated that "some of the present excises enter into business costs and operate to disturb competitive relations. An outstanding example is the tax on transportation of freight."

A bill introduced by Rep. Dingell, D., Mich., designed to restore automotive taxes to prewar rates calls for the elimination of the 3 per cent tax on the transportation of property. This bill would also lower rates on gasoline, oil, trucks, trailers, autos, motorcycles, tires, tubes, and parts and accessories.

Eddy Current Clutch Fan May Appear on 1948 Fords

It is rumored that the 1948 Ford engine may have an eddy current clutch driving the cooling fan. The clutch, a development of the Dynamatic Corp., Kenosha, Wis., will begin to operate when the engine temperature reaches a fixed point and will automatically disengage at high speeds, thus saving several horsepower. Production of such a fan would be quite expensive, however, as it does not seem readily handled by mass production methods.

Genuine **SERVICE** INDIANAPOLIS *"Measurably Better"* **SPRINGS**

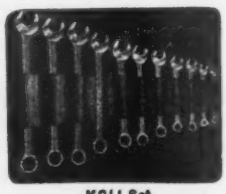
SERVICE SPRING COMPANY
INDIANAPOLIS 6, INDIANA

MOOG INDUSTRIES INC.
ST. LOUIS, MO.

• RUGER •
Hydraulic
FLOOR CRANES
and Arbor Presses

RUGER EQUIPMENT CO., Inc.
2425 St. Clair Ave. Cleveland 14, Ohio
P. O. Box 3821 Portland 8, Ore.

The MECHANICS TOOL & FORGE CO.
SABINA, OHIO
Manufacturers of



"MAC" TOOLS

For Tool Miles at Fair Prices Let Your "Mac" Distributor Serve You.

MAC TOOLS

KC11 Set
Catalog mailed on request
Ready and Anxious To Serve Mechanics

NO PUSH BUTTONS . . . NO DIAL FUMBLING
FITS ALL CARS AND TRUCKS

The new Delco even *looks* different . . . the conventional row of push buttons is absent! The amazing new electro-mechanical device pioneered by Delco and known as the ELECTRO-TUNER obsoletes even the very latest types of push-button tuning . . . the stations are trapped and tuned in one by one, *automatically,* at the touch of a finger tip!

What They Want

If you've never seen this electronic tuner in action, you've a surprise coming. It's just what the customers want—something NEW, NOVEL and MORE EFFICIENT than anything they have had previously. And it's a big-ticket item—which means good profits!

Unlimited Sales Possibilities

Think of the sales possibilities! The new Delco can be installed in all cars and trucks . . . it can be easily transferred from one vehicle to another!

The set is a perfected eight-tube superheterodyne, with specially selected seven-inch speaker. For complete information contact your nearest United Motors Service distributor or zone office.

THIS DOES IT!

This is the magic "trigger tube" which sets up a separate sensitivity field and traps the stations, one by one!

DELCO RADIO

A GENERAL MOTORS PRODUCT

Delco radios are distributed nationally by United Motors Service. See your United Motors distributor about the Delco radio line.

UNITED SERVICE MOTORS

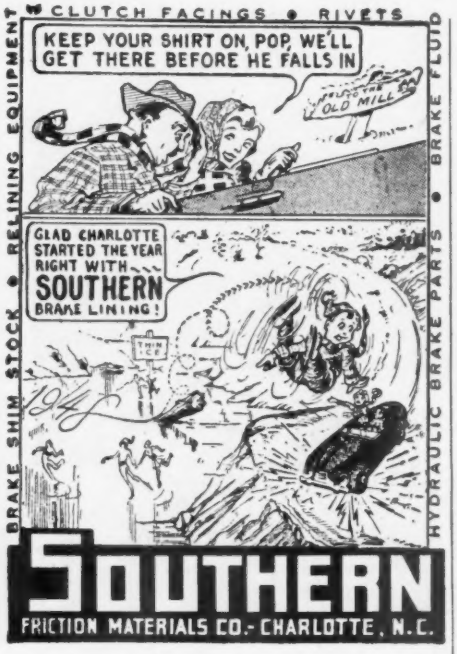
Shurhit
Triple Seal Moisture-Proof
CONDENSERS

Ask your Shurhit jobber or write us for details on these super-quality replacement parts. Complete Shurhit line includes Condensers, Contact Points, Rotors, Caps, Coils, Brushes, Cut-Outs, Switches, and Spark Plugs.

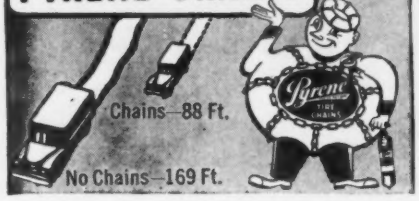
SHURHIT PRODUCTS, INC.
Waukegan, Ill.

COUPON
"14 for 5" Trial Offer

Prove the money-making performance of the Milwaukee "No Nick" Fender Hammer in your own shop. Attach this coupon to your business letterhead for complete details on liberal "14 for 5" Trial Offer. Mail to Milwaukee Electric Tool Corporation, 5330 W. State St., Milwaukee 8, Wis.



FOR QUICKER STOPS ON SLIPPERY ROADS USE
PYRENE CHAINS



DUNK 'EM IN GUNK H-S

When in DETROIT

Whether on business or pleasure-bent, make this "Goodwill Hotel" your headquarters. Located right in the center of everything . . . a block east of Woodward Avenue on Elizabeth Street, overlooking Grand Circus Park, Hotel Wolverine is accessible to all sections of the city.

500 rooms . . . each with tub and shower. Good food. Ample parking space; garage service also available.

Home of THE TROPICS . . . most unusual night spot in Detroit. Romantic South Seas atmosphere.

HOTEL WOLVERINE
"The Goodwill Hotel"
RATES FROM
$2.50 SINGLE • $4.00 DOUBLE

Utah Dealers Elect Officers for Coming Year

At the annual convention of the Utah Automobile Dealers Association held recently the following officers were elected for the coming year; President, Grant E. Hayes of Salt Lake City; Vice Presidents, G. Lowry Anderson of Springville, George T. Frost of Ogden, and Ben Redd of Price; Secretary, Harold Holley of American Fork, and Treasurer, Fred A. Carleson of Salt Lake City.

329 people attended the banquet, the largest attendance in the history of the organization.

Montana Dealers Hold Annual Convention

At the annual convention of the Montana Automobile Dealers Association three of the featured speakers were M. O. Anderson, President of NADA, Bud Darlington of the Inter-Industry Safety Committee, and Karl Richards. The following officers were elected for the coming year. George Schotte, President; Barney Ryan, 1st Vice President; Dee Washburn, 2nd Vice President; John J. Jewell, Secretary-Treasurer.

Classified Advertisements

MANUFACTURER'S REPRESENTATIVE. Call on jobbers with quality wheel balancer, $24.50 net. Liberal jobber discount and representative's commission. Exclusive territory. Write Ray-De-O-Ray Mfg. Co., Sioux City 12, Iowa.

Delco and Westinghouse light plant parts. Buy from manufacturer. Free catalog. Republic Electric, Davenport, Iowa.

SAFE
SPEAKER QUALITY

SPEAKER TUBE AND TIRE REPAIRS
One Reliable Source for all your needs
Electromatic Vulcanizer • Match Patch Vulcanizer • Match Patches • Electro-Patches • Rubber Rivets • Replacement Valves • Electro-Timer • Casing Patches • Convertible Tire Valves • Valves and Caps • Motorists' Kits • Solvents • Beveled Patches.
J. W. SPEAKER CORP. • Milwaukee 12, Wis.

The first important thing to know about Blue Streak battery cable is that it has a friendly understanding with the weather. Even in temperatures down to a numbing zero, this battery cable delivers the charge.

The second thing you ought to consider is the easy installation. The terminal in the Blue Streak cable has a raised bolt, so you have plenty of working room between the bolt and top of the battery.

In the third place, this Blue Streak cable features the exclusive battleship lug – twice the thickness of an ordinary lug and naturally sturdier under the strain of engine vibration.

Fourth, fifth and sixth – Blue Streak is a better looking cable with its smooth, glossy finish! The boxes are clearly coded for quick, time-saving identification! And finally, Blue Streak cable is of the quality that makes your work stand up longer.

Next time you're at your jobbers put in a supply of Blue Streak battery cables. They're better for your customers and better for your business all around.

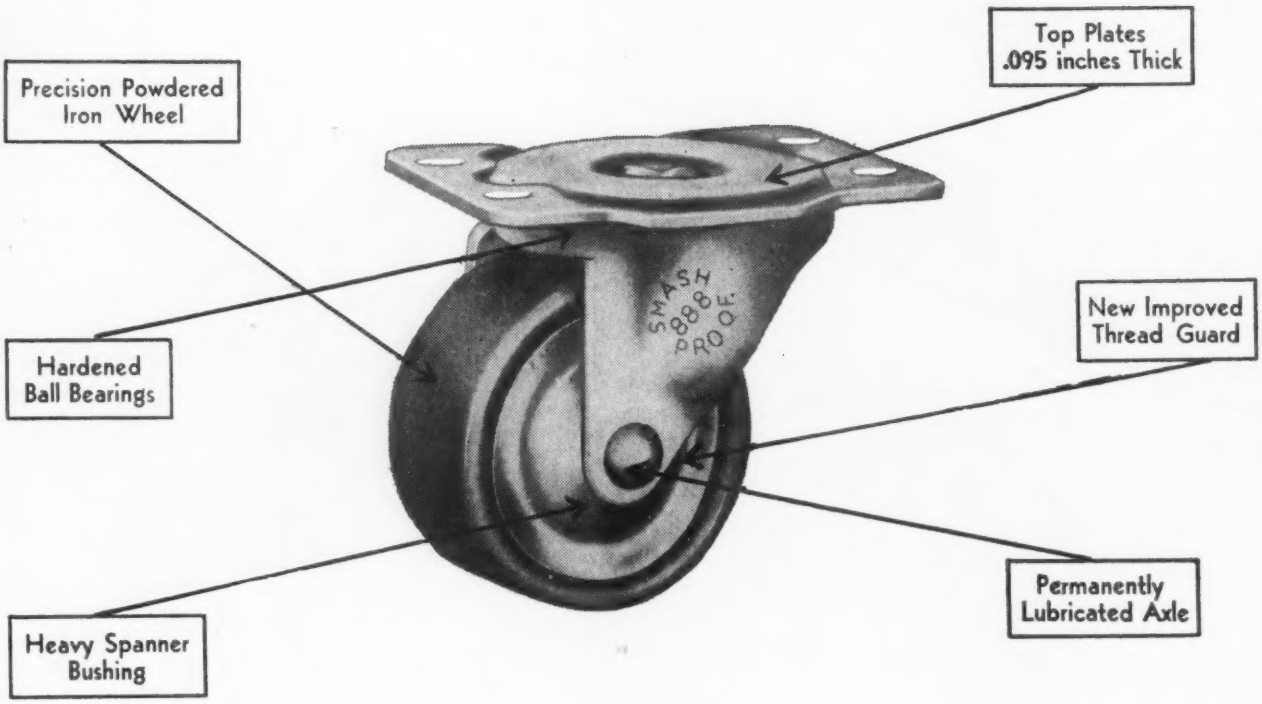
better your business... ***buy Blue Streak***

STANDARD MOTOR PRODUCTS, INC., LONG ISLAND CITY 1, NEW YORK

Announcing the NEW No. 888

Smash-Proof

CREEPER CASTER



NO MORE WOBBLY WHEELS! NO MORE STUCK SWIVELS!
AT LAST WE HAVE PERFECTED A CREEPER CASTER THAT WILL STAND UP FOR YEARS OF NORMAL USE

Our new wheels are made of imported Swedish powdered iron. These are not only precision made but much more durable than the ordinary cast iron

— SOLD BY ALL LEADING AUTOMOTIVE JOBBERS —

HULBERT MANUFACTURING CO. ◆◆ Ashtabula, Ohio

ARE YOU USING THIS

Short Sales Story?

HI-TEST L·O·F SAFETY PLATE

"We have replaced your window with the finest Safety Plate Glass"

When glass replacement customers leave your shop do they *know for sure* that you've used good glass?

There *is* a way to assure them—point out the L·O·F Hi-Test Safety *Plate* Glass trade-mark. It shows:

1. It's *Plate* glass— for maximum freedom from distortion.

2. It's *Safety Plate* glass—two panes laminated with a sheet of clear, tough plastic.

3. It's *L·O·F* glass—a name that is recognized for top quality.

This trade-mark builds customers' confidence in you—confidence that leads to future business in other automotive items.

That's why it pays to be sure that the stenciled identification "L·O·F Hi-Test Safety Plate" is plainly visible after every installation.

Libbey·Owens·Ford Glass Company, 7518 Nicholas Building, Toledo 3, Ohio.

WHEREVER VISION IS IMPORTANT USE L·O·F *Polished Plate* GLASS

LIBBEY·OWENS·FORD
a Great Name in **GLASS**

Rear View mirrors
E-Z-I Rear View mirrors
Visor Vanity mirrors
LIBERTY MIRROR DIVISION
Brackenridge, Pa.

K-D MANUFACTURING CO., LANCASTER, PA., U.S.A. • HAMILTON, ONTARIO, CANADA

Spark Your Service Business

with DELCO REMY ELECTRICAL EQUIPMENT

A BUSINESS-BUILDING

UNITED MOTORS LINE

UNITED SERVICE MOTORS

Here's the line of electrical equipment that peps up profits—"sparks" your service business along the road to bigger things! Delco-Remy electrical parts and units hand you a huge market on a platter, because Delco-Remy is original equipment on leading makes of cars and trucks.

You get fast-moving parts for day-in, day-out service and parts for older models too. So take your tip from the thousands of service dealers who are "going to town" with Delco-Remy, and tie-in with the greatest name in electrical equipment.

You'll find, in fact, that all United Motors lines bring you the leading automotive parts and products in the field. Look over the list below—ask yourself if it's not time to expand your business by adding to your lines. You get individually planned sales programs, powerful merchandising helps, latest catalog information to help you get started and help you grow. Talk it over with your United Motors distributor *now* . . . or write United Motors Service direct.

UNITED MOTORS SERVICE

DIVISION OF GENERAL MOTORS CORPORATION • GENERAL MOTORS BUILDING, DETROIT 2, MICHIGAN

DELCO Batteries	DELCO Radio Parts	DELCO Home Radios	DELCO-REMY Starting, Lighting and Ignition
AC Fuel Pumps, Gauges and Speedometers	HYATT Roller Bearings	NEW DEPARTURE Ball Bearings	KLAXON Horns
INLITE Brake Lining	DELCO Auto Radios	HARRISON Thermostats	HARRISON Radiators
SAGINAW Jacks	DUREX Gasoline Filters	DELCO Shock Absorbers	DELCO Hydraulic Brakes
	HARRISON Heaters	GUIDE Lamps	

ARE YOU STILL AN ACTIVE PARTNER...

in this "7½ billion-a-year" success?

NEVER was there a partnership like the nation-wide brotherhood of volunteers who have helped sell, advertise, and promote U. S. Savings Bonds! Their program is the greatest sales operation at the lowest cost in history. Last year sales of Savings Bonds were 7½ billion dollars—*exceeding redemptions by over a billion dollars.*

Retailers merit a major share of the credit for this splendid achievement, for during 1946 retail stores donated 41.3% of all sponsored ads on E Bonds. Their work has been a powerful tool in building security for the nation at large and for millions of Bond-holders individually.

Now the important thing is to keep up the good work. Here are two ways: (1) Devote a generous portion of your advertising schedule to the "Buy Where You Bank" plan, explained in the box. (2) Build up your Payroll Savings Plan. No. 1 brings your store good-will. No. 2 brings a feeling of extra security to your employees, enables them to be happier, better workers. And *both* steps build future buying power—future security—for your store, your community, and your country. Every $3 put into Savings Bonds pays $4 at maturity.

New plan broadens opportunity for regular Savings Bond buying

BEGINNING in June the Treasury Department and the banks of America will make it possible for people *not* on the Payroll Savings Plan to purchase Bonds monthly on an "automatic" arrangement with their banks. This program is intended for self-employed people and others to whom the advantages of Payroll Savings are not available.

Support this new campaign by devoting some of your advertising space to the "Buy Where You Bank" plan.

The Treasury Department acknowledges with appreciation the publication of this message

This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and The Advertising Council.

At Last ...Perfect Synchronization of the Ignition System at All Speeds

THE NEW SYNCHROMATIC IGNITION BREAKER PLATE

That is delivering sensational—almost unbelievably improved car performance gives you always . . . .

REQUIRED VOLTAGE CONTROLLED AUTOMATICALLY

This is the first major automotive ignition improvement in over ten years.

MANY, MANY TESTS PROVE

It scientifically gives both old and new cars more pep, more zing, smoother performance, at all speeds, and because it frees your motor of jumping and skipping, increased mileage.

A CONSERVATIVE USER SAYS

"Its outstanding performance amazes me. I never have a hesitant moment when I apply more throttle, at any speed."

The perfected Synchromatic Ignition Breaker Plate is designed to fit and operate with no alteration or machine work necessary for installation on present day distributors.

Distributed in the West by . . Rodman & Company, 1827 South Hope St., Los Angeles, California—Distributed in Canada by . . Frank T. Ross & Son with offices in Toronto and Vancouver.

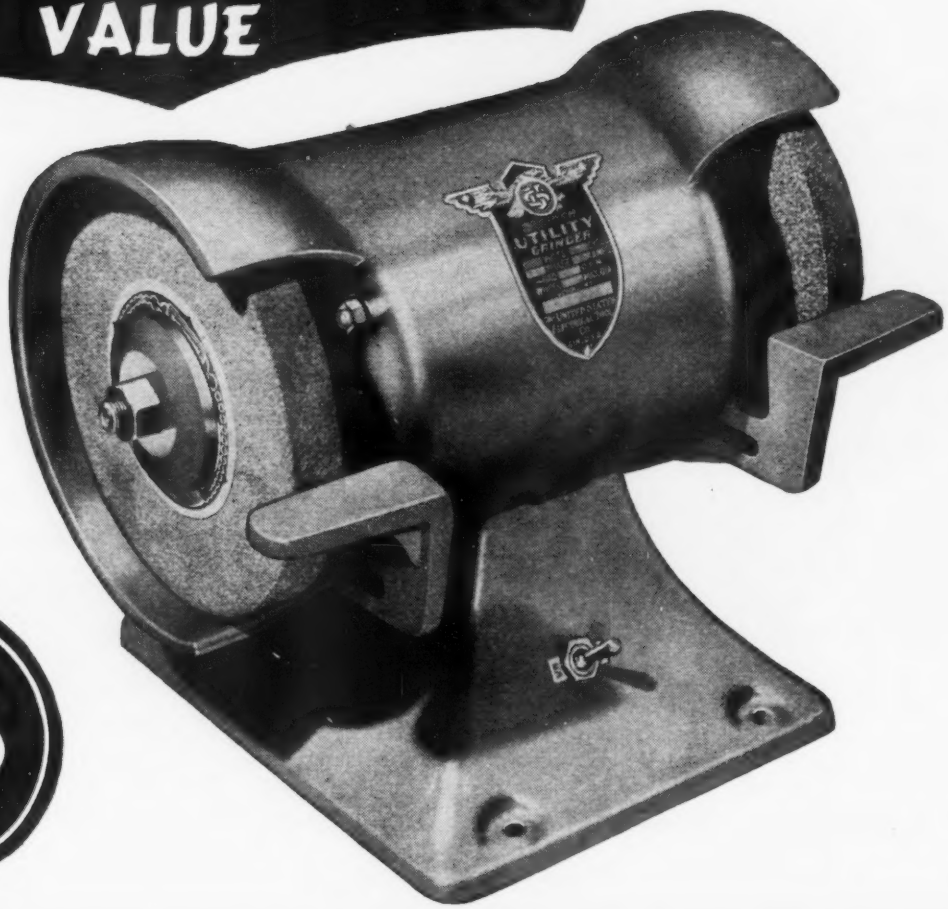
Write or wire for complete information and prices.

SYNCHROMATIC SALES, CORP.

1700 Wildwood Ave.—Jackson, Michigan

AMERICA'S GREATEST GRINDER VALUE

FOR SHIPMENT NOW



UNITED STATES 6-INCH UTILITY BENCH GRINDER

Reddy

For shops, garages, farms, home workshops and general industrial uses.

Compact . . . powerful . . . precision-engineered . . . precision-built. Sturdy construction . . . well balanced. Brilliant scarlet housing.

MOTOR: 1/3 hp, 3450 rpm, permanent split capacitor totally enclosed ball-bearing motor.

WHEELS: 6"x3/4"x1/2"; one coarse and one fine.

TOOL RESTS adjustable to wheel wear.

REDDY for

- *tool grinding*
- *buffing*
- *wire brushing*
- *polishing*
- *general purpose grinding*

CONTACT YOUR DISTRIBUTOR OR WRITE DIRECT

The UNITED STATES ELECTRICAL TOOL Co.
CINCINNATI, OHIO

NEW EQUIPMENT—NEW TOOLS—NEW CUSTOMERS

Your buying power is multiplied many times by the liberal terms and simplified conditions of the Automotive Equipment Plan.

You can buy specialty equipment for handling extra profitable big jobs and you don't have to tear a hole in your bankroll to do it.

Start the wheels. Get that income-producing machinery going. See your jobber today.

THE BEST EQUIPPED SHOP GETS THE PROFITABLE BUSINESS

BUY . . . AND FINANCE . . . THROUGH YOUR JOBBER

ONE CONTRACT . . . ONE COST . . . INSURANCE INCLUDED

AUTOMOTIVE EQUIPMENT TIME PAYMENT PLAN

If you don't know about A E P . . . ask your jobber.

COMMERCIAL CREDIT CORPORATION

A Subsidiary of Commercial Credit Company, Baltimore

MORE THAN 300 OFFICES IN PRINCIPAL CITIES OF THE UNITED STATES AND CANADA

MOTOR AGE

Covers the BUYING POWER in the Automotive After-Market

MOTOR AGE has a total monthly press run of 67,300. Its total paid circulation is 65,700.

It reaches 24,302 Car and Truck Dealers out of a total of 39,055.

It goes to 36,762 Independent Maintenance Establishments out of a total of 51,151.

It has 3,943 Jobber subscribers out of a total of 7,888. In other words MOTOR AGE reaches approximately two-thirds of the automotive retail establishments, and since its subscription staff is salaried and completely controlled, this circulation is highly selective, quality coverage. It represents preponderantly managers and proprietors of the larger and more important establishments — men with buying power and money to implement it.

RENEWAL PERCENTAGE 74.65%

The popularity of MOTOR AGE with its readers may well be measured by its subscription renewal rate, which is 74.65% — the highest for any directly competitive publication.

MOTOR AGE

A CHILTON Publication

Chestnut and 56th Streets ⓥ Philadelphia 39, Penna.

CLEAN FOR PROFIT

with HYPRESSURE JENNY STEAM CLEANER

Get More Business... Make More Money... Save on Labor!

Hypressure Jenny provides the automotive service and repair industry with dozens of business-building, profit-making opportunities. For example: Hypressure Jenny will clean a car motor like new in 10 to 15 minutes . . . remove bugs, dirt and leaves from radiators and grille work in 1 to 2 minutes . . . flush out sluggish radiators . . . clean mud and dirt from chassis and the undersides of fenders . . . thaw frozen cooling systems, etc. Hypressure Jenny will bring you more repair work too, by uncovering worn and damaged parts which might otherwise remain unnoticed.

Hypressure Jenny makes money for you in the shop by cleaning motors and parts before repairs, thus saving up to 40% of your mechanics' time otherwise lost fighting dirt and grease . . . cleans grease racks . . . pits . . . runways . . . floors . . . walls . . . windows . . . skylights . . . lavatories, etc., 8 to 10 times faster than by hand methods.

Many users report that the savings effected in man-hours alone have paid for their Hypressure Jenny in a few weeks.

A letter or postcard will bring you full particulars and the address of your nearest Hypressure Jenny dealer. Why not write today?

HYPRESSURE JENNY DIVISION

HOMESTEAD VALVE MANUFACTURING COMPANY, P. O. Box 95, Coraopolis, Pa.

QUAKER RUBBER AUTOMOTIVE PRODUCTS

•

Fan Belts — Radiator Hose — Curb Air Hose — Signal Hose — Packings and others.

•

High quality, attractive items at prices that really meet competition.

•

Over 62 years producing the very finest Automotive and Industrial Rubber products.

•

Write for catalog and prices.

REG. U. S. PAT. OFF.

QUAKER RUBBER CORPORATION
PHILADELPHIA 24, PA.
NEW YORK 7 CLEVELAND 15 CHICAGO 16 HOUSTON 1

Western Territory
QUAKER PACIFIC RUBBER COMPANY
SAN FRANCISCO • LOS ANGELES • SEATTLE

WINNER IN STOCK CAR RACE SETS NEW TRACK RECORD!

1946 Mercury 8 Club Coupe makes 250 laps NON-STOP in 1 hr. 59 min. at Carrell Speedway, Gardena, California, through use of Wynn's Friction Proofing oil!

Winner Bob Estes, Inglewood Lincoln-Mercury dealer, writes:

"Before the race, we serviced the crankcase, transmission and differential with Wynn's Friction Proofing Oil and I am fully convinced that through its use my driver, Andy Linden, was able to run the entire 250 laps without a single stop, finishing in 1st place and establishing a new track record for this gruelling distance.

"After the race we inspected all moving mechanical parts of the car and found them to be in perfect condition, with no sign of strain or wear. We use WFPO regularly, both in new cars and on customer service jobs!"

WYNN'S FRICTION PROOFING OIL

If you're not using WFPO, you're missing a bet! Better contact —

WYNN OIL COMPANY
SAN GABRIEL, CALIFORNIA
FIELD PROVEN • GUARANTEED

DEFIES WEAR • INCREASES H. P.

- Every car deserves the positive protection of Littelfuse quality.
- Get this superior quality in AUTO FUSES . . . now at competitive prices.
- Order now for quick delivery.

LITTELFUSE *Incorporated*
4761 E. RAVENSWOOD AVE. CHICAGO 40, U. S. A.

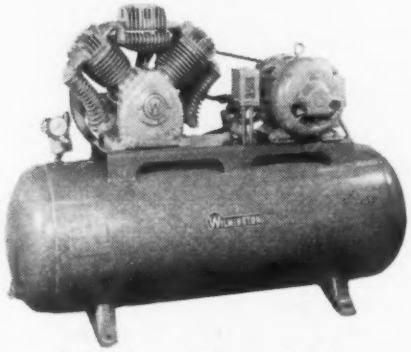
NITE-T-LITE • SWITCH-LITE • IGNITION-FRITZ • NEON INDICATORS
SWITCHES • CIRCUIT BREAKERS • FUSES, MOUNTINGS AND ACCESSORIES

WILMINGTON AIR COMPRESSORS

Horizontal and Vertical • Complete Range of Sizes 1/4 to 5 HP.

NEW DESIGNS . . . SIMPLE . . . COMPACT!

ONE AND TWO CYLINDER UNITS
SINGLE STAGE AND TWO STAGE FOR LIGHT AND HEAVY DUTY REQUIREMENTS

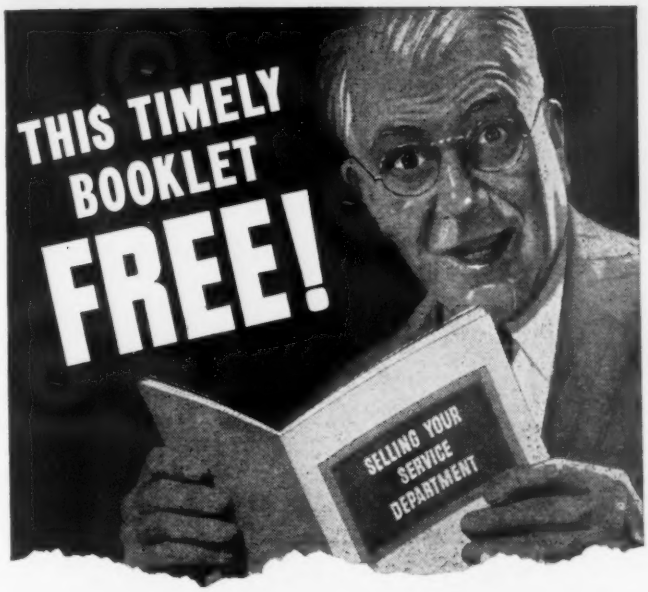


Write for Catalogs and Prices
MANUFACTURERS OF AIR COMPRESSORS SINCE 1903

THE AUTO COMPRESSOR COMPANY

WILMINGTON AIR COMPRESSOR DIVISION

WILMINGTON OHIO U. S. A.



Here's a booklet that's as timely as tomorrow—jam packed with proved ideas for promoting your Service Department. It contains methods, forms and materials necessary to make intelligent customer follow-up pay you dividends in sales and profits.

Get this booklet, or any of the 9 other R & R files containing information regarding forms and materials on their vital subjects. You don't even need to write a letter—just check off your wants on the list below, attach it to your letterhead, and mail to

The Reynolds & Reynolds Company, Dayton 7, Ohio.

Please send information on the subjects checked:

- ☐ Selling Your Service Department
- ☐ Service Dept. Operating Forms
- ☐ General Office Forms
- ☐ Accounting Aids
- ☐ Paper Tools for Handling Car Sales
- ☐ Parts and Accessory Control
- ☐ Credit and Collection Forms
- ☐ Dealer Stationery and Checks
- ☐ Payroll Systems and Forms
- ☐ Factory Designed Accounting System

The
REYNOLDS
&
REYNOLDS

COMPANY • DAYTON 7, OHIO

Established 1866

WESTERN BRANCH • 400 W. PICO BLVD. • LOS ANGELES

Save Time and Effort

WASH TRUCK AND CAR BODIES

The Oakite Way

You can get streak-free surfaces in less time and with less effort, when you wash your truck and car bodies with that "safe", scientifically formulated, quick-acting material . . .

OAKITE COMPOSITION NO. 70

Because of its more effective detergent properties, Oakite Composition No. 70 thoroughly removes all dirt, grease and grime . . . restores original bright-looking appearance to painted surfaces by removing color-dulling traffic film. Oakite Composition No. 70 is easy to use and rinses readily even when allowed to dry down. This widely-used material may be applied with complete safety to such surfaces as paint, lacquer and enamel . . . will not affect decals or top varnish coats.

Oakite DATA Helps FREE!

Your nearby Oakite Technical Service Representative will gladly send you details of how this material can save you time, effort and money . . . he will give you a convincing on-the-spot demonstration. His personal services involve no obligation. Write to him today!

OAKITE PRODUCTS, INC., 24G Thames St., NEW YORK 6, N. Y.
Technical Representatives in Principal Cities of U. S. & Canada

OAKITE
REG. U. S. PAT. OFF.

Specialized Industrial Cleaning
MATERIALS • METHODS • SERVICE

NEW WRENCH FOR SOFT METAL FITTINGS

- Doesn't Crush
- Doesn't Mutilate
- Self-Equalizing
- Adjustable Jaws
- Capacity 3/8" to 5/16"

TRI-GRIP "6"

Tri-Grip ratchet-action jaws are self-equalizing, provide positive 3-way grip on carburetor, gas and oil line fittings, refrigerator lines, etc. Order yours today. $1.50 Prepaid. If not completely satisfied return in 10 days and money refunded.

TRI-GRIP CO.
1187 Bellows St.
AKRON 1, OHIO

Attractive Territories Open For Jobbers

TG-148-21

The
PERFECT MOTOR BLOCK *and* RADIATOR REPAIR

It's Approved.

21st year service.

We could use the services of a good Factory Representative for Eastern States

RADIATOR SEAL CO.
120 Stutsman St. Council Bluffs, Iowa

DIP THEM IN **DIRTY**

TAKE THEM OUT **CLEAN**

SUCCESSOR TO BENDIX PARTS CLEANER

USE BENDIX **METAL/cleane** FOR ALL METAL PARTS

BENDIX PRODUCTS DIVISION of
SOUTH BEND 20, INDIANA

Bendix AVIATION CORPORATION

V-O

THE QUALITY LINE OF AUTOMOTIVE CHEMICALS

Profitable to Sell—Profitable to Use

SMOOTH ENGINE BREAK IN OIL
ANTI-FREEZE, PERMANENT
AUTO POLISH
CARBON REMOVER
CARBURETOR JET CLEANER
CHROME-GLO
CRANKCASE OIL STIMULATOR
GLASS CLEANER
HUDSON CLUTCH OIL
HYDRAULIC BRAKE FLUID
HOME USE OIL
HYDRAULIC BRAKE FLUSH
HYDRAULIC SHOCK FLUID
HYDRAULIC JACK FLUID
KNEE ACTION FLUID
LIGHTER FLUID
PENETRATING OIL
RADIATOR CLEANER
RADIATOR RUST RESISTER
RADIATOR STOP LEAK
RUBBER SHACKLE FLUID
TIRE PAINT

Write for Free Catalog. Some Good Territory Available for Distributors

V-O MANUFACTURING CO.
13245 Sherman Way, North Hollywood, Calif.

CHECK SPRING TENSION!

A PERFECT valve grinding job can't give efficient engine performance unless all valve springs function properly.

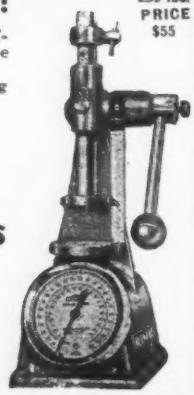
Insure every motor overhaul job by checking spring tension with

RIMAC
SPRING TESTER
For VALVE and CLUTCH SPRINGS

Used in production and recommended for service work by leading manufacturers of automobile, airplane, truck and tractor motors.

RINCK-McILWAINE, INC.
16 Hudson Street, New York 13

Range up to 250 lbs.
PRICE $55



WATER PUMP LUBRICANT

Eliminates all water pump noises — operates with any anti-freeze. Packaged in pints and gallon cans—order today.

Write for Illustrated Catalog of other Sure-Rite Automotive Chemical Products.

SURE-RITE PRODUCTS COMPANY
PHILADELPHIA 33, PENNA., U. S. A.
IN CANADA: 191 Queen St., E., Toronto, Ontario

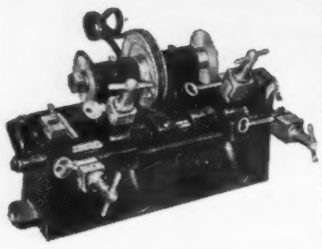
INCREASE THE PROFITS OF A PROFITABLE BUSINESS!

HOUK KEY MACHINES

Cut keys accurately, no more spoilage or misfit keys. Has no equal as an only all accessory machine, has milling cutter for cylinder keys, high speed slotting cutter for flat & bit keys & V-belt for motor.

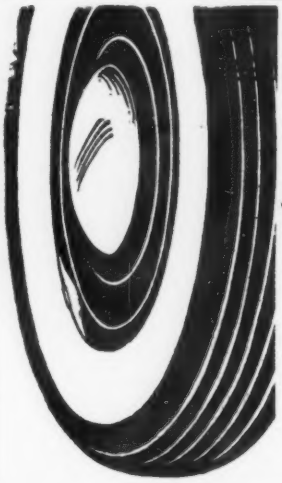
IMMEDIATE DELIVERY
$82.50 EA.
F.O.B. N.Y.

WHITLOCK Corporation
17 WARREN ST. NEW YORK 7, N. Y.



Please send without obligation:
Illustrated brochure of "Profitable Key Cutting"

NAME
FIRM
ADDRESS
CITY-ZONE STATE



SNUGL
FAD-A-WAY AUTOMOTIVE WHEEL BALANCE WEIGHTS

TRUCKS • BUSES • PASS. CARS

PAT. NO. D-119-321, D-5188, 2,036,757

MID-WESTERN AUTO PARTS
FACTORY
824 E. Elm Kokomo, Indiana

BRANCH:
736 S. GREENLEAF
WHITTIER, CALIF.

Buell Air Horns

Aristocrats

of SOUND SIGNALS

Buell Air Horns are easy to sell. A pair displayed in your show room will have an almost irresistible appeal to most new car buyers. Besides the extra profits, you will have the satisfaction of knowing that you are selling a safety item that will prevent accidents and save lives.

Buell Manufacturing Co.

2991 Cottage Grove Ave., Chicago, 16, Ill.

GET RID OF GAS FUMES

Solve Your Garage and Shop Ventilation Problem This Simple Inexpensive Way

What you have been waiting for—the final, successful solution to your garage ventilation problem all available in a packaged kit, including motor and blower, ready to install.

- **Removes gas fumes at source (exhaust pipes)**
- **Simple installation—no change or alteration of existing facilities.**
- **Not in your way—instantly in use or out of way when you don't need it.**
- **Saves man-hours and helps keep employees. Mechanics have less sinus, headaches, etc.**

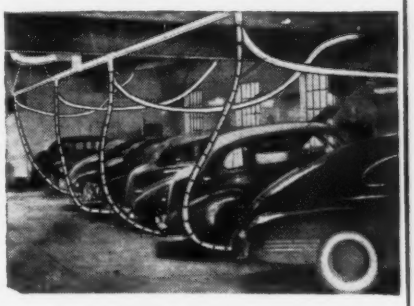
Flexible Metal Hose, Blowers, available for Existing Systems.

Complete packaged kit F.O.B. Decatur

187.50

Write for circular

Illustration shows standard kit with two extra tube outlets.



Write for circular.

THE NATIONAL SYSTEM OF GARAGE VENTILATION

DEPT. 810-A, 330 N. CHURCH ST., DECATUR, ILL.

World's Largest Manufacturer of Exclusive Garage Ventilating Equipment.

MILEY Black Gold BRAKE LININGS

Last Longer

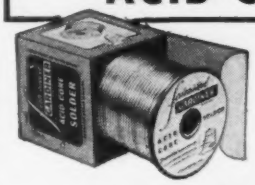
Quicker Acting

Shorter Stops

L. J. MILEY COMPANY
18 S. SANGAMON CHICAGO 7

Federated **GARDINER** BRAND

ACID CORE SOLDER



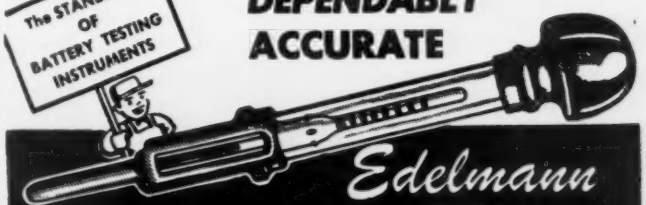
A free flowing and easy-to-use ACID CORE SOLDER for automotive and general work. You don't have to add any flux . . . the flux is in the solder. Comes in all commercial sizes and quantities.

Federated
METALS DIVISION
AMERICAN SMELTING AND REFINING COMPANY
WHITING, INDIANA (CHICAGO)

Federated first in the non-ferrous field FMD

The STANDARD OF BATTERY TESTING INSTRUMENTS

DEPENDABLY ACCURATE



Edelmann

THERMO "Break-Not"

HYDROMETERS

E. EDELMANN & CO. CHICAGO, ILLINOIS

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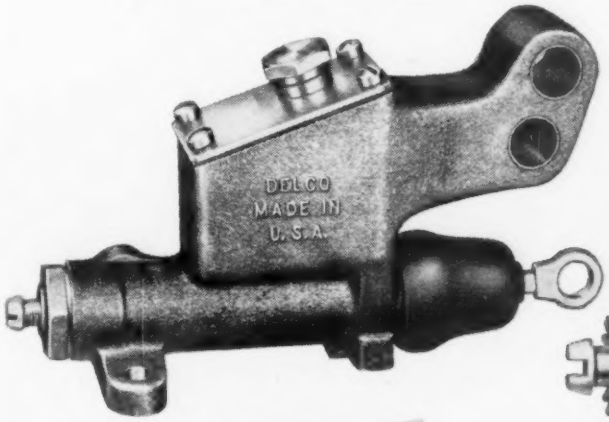
BIG 3 IN SAFETY

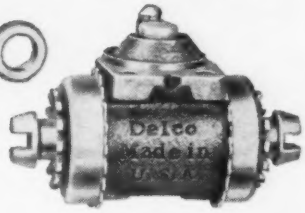
DELCO BRAKE REPAIR KITS

Protective-packed in sealed, metal-top containers that are easy to stock and easy to use, Delco brake repair kits supply you with all essential replacement parts for servicing master and wheel cylinders—all genuine original-equipment parts.



DELCO MASTER AND WHEEL CYLINDERS

Ready for installation; come to you direct from the original-equipment production lines in factory-sealed cartons that are your guarantee of genuine Delco quality.



DELCO BRAKE PRODUCTS

. . . for complete brake service

. . . for customer satisfaction

. . . for dealer profits

DELCO SUPER 9 BRAKE FLUID

Meets every requirement of the modern braking system. It is unaffected by temperatures (from 50 below zero to 300 above). It doesn't harm metal or rubber parts. Use Declene flushing fluid first—then refill with Delco Super 9 hydraulic brake fluid.

UNITED SERVICE MOTORS

DELCO BRAKE—A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

MORAINE PRODUCTS DIVISION OF GENERAL MOTORS

Delco

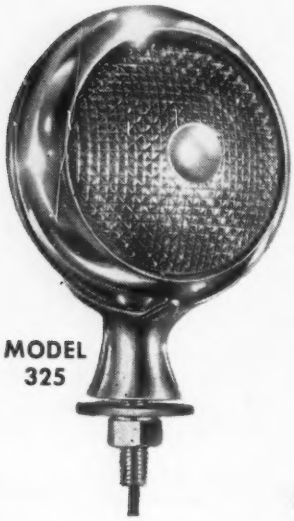
SUPER 9 BRAKE FLUID • DECLENE • BRAKE PARTS

STANDARD FOR EQUIPMENT • THE STANDARD FOR REPLACEMENT

Jobbers acclaimed the Thomson Sealed Beam Spotlight . . . its incomparably beautiful styling . . . its mechanical perfection. Seeing is believing! Close examination and comparison at the A.S.I. Show pointed out the superiority of the Thomson Spotlight. Two sizes—Model 15 and Model 32. Ball-bearing switch built right into the "Pistol Grip" handle provides finger-tip control. Plastic switch button and handle harmonize with all interiors. See starred features listed at right. Many others. Sales appeal aplenty—which should also appeal to profit-minded dealers.

- ★ Two Sizes
  —5-in. Head (Model 15)
  —6-in. Head (Model 32)
- ★ Sealed Beam Bulbs
- ★ Switch in Handle
- ★ Full 360° Rotation
- ★ Pistol Grip Control
- ★ Solid Brass Head
- ★ All-Weather Chrome Finish
- ★ Universal Bracket
  —Fits Most All Cars

Unsurpassed as a driving aid and safety feature—the Thomson Sealed Beam Spotlight adds beauty and style to any car, truck or bus. Easily operated. An accessory that gives GREATER VALUE FOR OWNER'S MONEY.



MODEL 325

Thomson
Back-up LIGHT

Spots all obstructions and warns other cars and pedestrians. "Spread-beam" lens diffuses light to cover large area. Four-inch overall diameter. All chrome. Uses 6 volt, 21 candle power bulb. Wire enters through stud. Available singly or in pairs. Another fast-selling profit item.

Write for catalog sheets and profit-facts—TODAY!

Standard-Thomson Corporation, Dayton 2, Ohio, U.S.A.